

Joint Publication 4-01.2



Sealift Support to Joint Operations



31 August 2005



PREFACE

1. Scope

This publication provides doctrine for sealift in support of joint operations across the range of military operations.

2. Purpose

This publication has been prepared under the direction of the Chairman of the Joint Chiefs of Staff. It sets forth joint doctrine to govern the activities and performance of the Armed Forces of the United States in operations and provides the doctrinal basis for interagency coordination and for US military involvement in multinational operations. It provides military guidance for the exercise of authority by combatant commanders and other joint force commanders (JFCs) and prescribes joint doctrine for operations and training. It provides military guidance for use by the Armed Forces in preparing their appropriate plans. It is not the intent of this publication to restrict the authority of the JFC from organizing the force and executing the mission in a manner the JFC deems most appropriate to ensure unity of effort in the accomplishment of the overall objective.

3. Application

a. Joint doctrine established in this publication applies to the commanders of combatant commands, subunified commands, joint task forces, subordinate components of these commands, and the Services.

b. The guidance in this publication is authoritative; as such, this doctrine will be followed except when, in the judgment of the commander, exceptional circumstances dictate otherwise. If conflicts arise between the contents of this publication and the contents of Service publications, this publication will take precedence unless the Chairman of the Joint Chiefs of Staff, normally in coordination with the other members of the Joint Chiefs of Staff, has provided more current and specific guidance. Commanders of forces operating as part of a multinational (alliance or coalition) military command should follow multinational doctrine and procedures ratified by the United States. For doctrine and procedures not ratified by the United States, commanders should evaluate and follow the multinational command's doctrine and procedures, where applicable and consistent with US law, regulations, and doctrine.

For the Chairman of the Joint Chiefs of Staff:



WALTER L. SHARP
Lieutenant General, USA
Director, Joint Staff

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SUMMARY OF CHANGES
REVISION OF JOINT PUBLICATION 4-01.2
DATED 9 OCTOBER 1996

- **Updates the sealift transportation responsibilities of the Chairman of the Joint Chiefs of Staff**
- **Adds discussion of the Global Transportation Network, Global Command and Control System, and the Global Combat Support System**
- **Changes terminology from Military Traffic Management Command to Military Surface Deployment and Distribution Command**
- **Expands discussion of responsibilities of the geographic combatant commanders, to include the creation of a Theater-Joint Transportation Board**
- **Greatly expands discussion of sealift planning**
- **Adds coverage of force protection and operations security**
- **Updates coverage of numbers and types of sealift assets**
- **Provides detailed discussion of the Voluntary Intermodal Sealift Agreement**
- **Updates Naval Control of Shipping to Naval Cooperation and Guidance for Shipping**

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EXECUTIVE SUMMARY COMMANDER'S OVERVIEW

- **Outlines the Organization and Responsibilities for Sealift Operations**
 - **Identifies Planning and Scheduling Elements**
 - **Discusses Sealift Assets**
 - **Describes Vessel Acquisition and Activation Programs**
 - **Provides Considerations for the Employment of Sealift Forces**
 - **Addresses Naval Cooperation and Guidance for Shipping**
-

Overview

Sealift is an integral element of the strategic mobility triad.

The role of sealift in the context of the strategic mobility triad (airlift, pre-positioning [PREPO], and sealift) is to deliver the combat units and their support equipment, as well as the vital sustainment for deployed forces as joint operations progress. In most cases, sealift accounts for the majority of the total cargo delivered to an operational area.

Sealift forces are employed in the three phases of strategic mobility. First, **PREPO afloat** is made up of ships from the afloat pre-positioning force (APF) of the Military Sealift Command (MSC). Second, **deployment (or surge)** includes ships from the United States Transportation Command (USTRANSCOM)-controlled fleet. Third, **sustainment** refers to shipping provided by the US merchant fleet, mostly containerships, to deliver large quantities of resupply and ammunition to forward-deployed forces augmented as necessary by the government controlled assets.

Forces and Authority

The Commander, United States Transportation Command (CDRUSTRANSCOM) is designated as the Department of Defense (DOD) single manager for transportation.

The Commander, United States Transportation Command (CDRUSTRANSCOM) provides common-user air, land (continental United States [CONUS] only), and sea transportation to the Department of Defense (DOD). To accomplish this, CDRUSTRANSCOM exercises combatant command (command authority) (COCOM) over the Military Surface Deployment and Distribution Command (SDDC), MSC, and the Air Mobility Command, which have been assigned (after coordination with the Chairman of the Joint Chiefs of Staff [CJCS]) by the Secretaries of the Military Departments.

Organizations and Responsibilities

Responsibilities: DOD

The **Secretary of Defense (SecDef)** is responsible for transportation planning and operations with DOD. Transportation-specific responsibilities include establishing and overseeing implementation of the overall policy for effective and efficient use of DOD and commercial transportation resources, and establishing overall policy guidance governing the transportation account of the Transportation Working Capital Fund.

Chairman of the Joint Chiefs of Staff (CJCS)

CJCS reviews and evaluates movement requirements and resources, apportions capability, and allocates capability when required.

Military Departments

The **Military Departments** retain the responsibility for organizing, training, equipping, and providing the logistic support (including Service-unique transportation) of their respective forces. Accordingly, the Secretary of the Army establishes and controls the necessary installation and port activities for the operation and administration of **SDDC**; the Secretary of the Navy establishes, organizes, trains, and equips **MSC** as a jointly staffed major command of the US Navy for assignment to CDRUSTRANSCOM.

CDRUSTRANSCOM

In addition to the responsibilities delineated above, **CDRUSTRANSCOM** provides transportation and common-user port management and terminal services for DOD as well as non-DOD agencies upon request; exercises COCOM of all assigned forces as authorized by the “Force for Unified Commands” Memorandum; exercises responsibility for global air, land, and sea transportation planning (deliberate and crisis action); acts as DOD focal point for items in the transportation

system; and exercises responsibility for intertheater (non-theater assigned) aeromedical evacuation.

*Military Surface
Deployment and
Distribution Command*

As the Army component of USTRANSCOM, **SDDC** is the CONUS transportation manager and provides worldwide common-use ocean terminal services and traffic management services to deploy, employ, sustain, and redeploy US forces on a global basis. These services also include the use of common-user sealift through the Voluntary Intermodal Sealift Agreement (VISA) program.

Military Sealift Command

As the Navy component of USTRANSCOM, **MSC** operates common-user and exclusive use sealift transportation services to deploy, employ, sustain, and redeploy US forces on a global basis.

Maritime Administration

Maritime Administration (MARAD) is an agency within the Department of Transportation (DOT), responsible for assuring that US Merchant Marine shipping is sufficient to meet the needs of national defense in times of war or national emergency, and can also support the domestic and foreign commerce of the US.

US Coast Guard

The **US Coast Guard** (USCG), an agency of the Department of Homeland Security and also a branch of the Armed Forces of the United States, is specifically authorized to assist DOD in the performance of any activity for which the Coast Guard is especially qualified. During joint force deployment and redeployment operations, the USCG can assist in providing force protection of military shipping at US seaports of embarkation (SPOEs) and overseas ports of debarkation (PODs) by conducting port security and harbor defense operations.

*CJCS Joint
Transportation Board*

When convened, the CJCS **Joint Transportation Board (JTB)** acts for the CJCS to communicate President and SecDef priorities and adjudicate competing requirements for intertheater mobility lift assets and/or resolve other issues that negatively impact the Defense Transportation System (DTS) and which USTRANSCOM and the supported combatant commander(s) are unable to resolve.

*Geographic combatant
commanders.*

Geographic combatant commanders, in coordination with CDRUSTRANSCOM and other supporting commanders, are responsible for the deployment of forces assigned from origin to destinations.

Planning

The use of sealift assets leading up to and during a crisis or conflict involves significant operational considerations, each of which must be the subject of detailed planning. From a planning standpoint, supporting strategic transportation is a four-step process. First, it is necessary to determine the unit equipment and sustainment movement requirement. Secondly, the requirement must be stated in the appropriate units of measure. Third, the deployment is simulated using available forces. Finally, the plan is confirmed as transportation feasible.

During execution planning, the required sealift forces are identified and tentatively scheduled to move the earliest deploying units.

In general during execution planning, USTRANSCOM and its component commands are responsible for ensuring that adequate transportation is available to support the operation order (OPORD) when executed, developing feasible transportation schedules, establishing initial and follow on requirements for sealift capability, resolving transportation shortfalls, adjudicating transportation allocation conflicts with the JTB, and publishing transportation coordinating instructions.

The application of strategic sealift divides into three broad categories: pre-positioning, surge shipping during initial mobilization, and resupply sustainment shipping.

The methods by which forces are introduced into an operational area vary from Service to Service. **Strategic sealift of accompanying supplies for Army and/or Air Force units is normally point-to-point unless otherwise specified by the combatant commander**, so that any sealift asset assigned by MSC to move cargo from SPOE to seaport of debarkation is satisfactory if the combatant commander's force closure requirements can be met. However, this is not always true for Marine Corps forces. The expeditionary Marine forces, as an integral component of a larger naval force, can influence events within the world's littorals using the sea as maneuver space and as a secure operating base. Seabasing enables forces to move directly from ship to inland objectives.

Force Protection and Operations Security

Merchant sealift ships have virtually no self protection capability.

Unprotected merchant ships are faced with the risk of loss of ship, cargo, and personnel. Military forces must be assigned either to eliminate the threat so merchant ships can transit unopposed at any time, or to provide direct protection, to include ship

augmentation, during transits of threat environments. As directed by their geographic combatant commanders, Navy component commanders are tasked with establishing and implementing plans to provide surface and air escort for the protection of merchant shipping.

Sealift has several significant operations security aspects.

The first, and possibly most obvious problem, is the presence of a large number of fully loaded merchant ships at anchor in a major port. Such a gathering over several days **is an obvious indication that a convoy or major operation is being planned**, and is almost impossible to keep secure. Somewhat more subtle, but still obvious, is the gathering of large numbers of sealift ships at a forward base, particularly those ships which can be identified with an assault follow-on echelon. The key point here is that, while a large mass of merchant shipping can be regarded as a target in and of itself, the presence of certain types of merchant ships can indicate a major military operation even when the “military” end of the operation has scrupulously observed operations security measures.

Automated Planning Tools

Joint planners use a number of automated planning tools to assure accuracy and efficiency in sealift planning. Among these tools is the Transportation Coordinator’s Automated Information for Movement System, Joint Flow and Analysis System for Transportation, and Integrated Computerized Deployment System.

Sealift Assets

“Common-user shipping” are merchant-type ships available to engage in the transportation of cargoes for one or more Services.

Sealift forces are those militarily useful merchant-type ships available to DOD to execute the sealift requirements of the DTS across the range of military operations. The sealift force is composed of shipping from active government-owned or controlled shipping; government-owned reserve or inactive shipping; US privately owned and operated commercial shipping; US privately owned, foreign flag commercial shipping; and foreign owned and operated commercial shipping.

Sealift shipping falls into three broad categories: dry cargo ships or freighters, liquid cargo carriers or tankers, and passenger ships.

During joint operations, dry cargo ships transport the equipment and supplies required to conduct and sustain the operation. Types of dry cargo ships are: breakbulk; roll-on/roll-off (RO/RO) ships; containerships; barge ships; float-on/float-off ships; and dry bulk carriers.

In support of joint operations, tankers or liquid cargo ships transport liquid/petroleum products to DOD storage and distribution facilities around the world, as well as to MSC oilers at sea. In support of joint operations, passenger ships provide troop carrying, noncombatant, or sealift medical evacuation capability.

Sealift Ship Programs are established to meet strategic sealift requirements.

The conventional sealift assets discussed above cannot meet all requirements. Therefore, Sealift Ship Programs have been established. **Fast sealift ships** are former containerships, converted to a RO/RO configuration with on-board cranes and self-contained ramps that enable the ships to off-load onto lighterage while anchored at sea or in ports where shore facilities for unloading equipment are unavailable. **Large medium speed RO/RO ships** are similar to other RO/RO ships, but are faster, have two or three times the stowage capacity, and are built specifically for military use, including offloading in a stream. **Tactical auxiliary crane ships** are converted containerships on which two or three twin-boom revolving heavy-lift cranes have been mounted. Two **aviation logistics support ships** provide dedicated sealift for critical movement of the Marine Corps aviation sustainment forces. The **hospital ship** program consists of two converted tankers equipped with 12 operating rooms and 1,000 patient beds.

The APF consists of **maritime PREPO ships**, a strategic deployment option that quickly combines the substantial PREPO equipment and supplies loaded aboard the ships of a maritime PREPO ship squadron with a Marine air-ground task force to establish a formidable combined arms force cable of sustained operations. **Afloat PREPO stocks-3** consist of 10 government-owned and commercially chartered ships on which pre-positioned military heavy combat and combat support equipment, munitions, and sustainment supplies are stored to meet rapid deployment requirements of the US Army. The **Navy, Defense Logistics Agency, Air Force Ships program** operates pre-positioned vessels around the world to support US Navy, Defense Logistics Agency, US Air Force, and US Marine Corps requirements.

Sealift enhancement features.

Sealift enhancement features (SEFs) consist of **special equipment and modifications that adapt merchant-type dry cargo ships and tankers to specific military missions**. They are typically installed on ships of the Ready Reserve Force (RRF) or on ships under MSC control. The SEFs fall into three categories: productivity, operational, and survivability enhancements.

Vessel Acquisition and Activation Programs

The vast majority of vessels required to support military operations are not under DOD control during peacetime.

To acquire the necessary ships to accomplish lift requirements during joint operations, lease agreements or operating agreements (charters) must be executed between the DOD and the owning and controlling organizations. A **bareboat charter** is a contract whereby the charterer gets the rights and obligations of “ownership.” Under a **voyage charter**, the charterer specifies type of vessel required, cargo to be loaded, and where the vessel is to load and discharge. A **time charter** is a contract for the service of the vessel (i.e., its cargo carrying ability), for an agreed period of time. **Time and voyage charters** are most commonly used to acquire sealift shipping to meet short-term military requirements.

Government-owned shipping, although limited in numbers, is the most readily available sealift source for quickly deploying large quantities of unit equipment.

Active assets consist of active government-owned and controlled sealift forces, MSC common-user point to point ships, and the APF. Common-user ships are owned by or under long-term time charter to MSC and are employed in providing sealift to all DOD agencies on a nondedicated basis. **Inactive or reserve sealift assets** consist of **Navy-owned ships** maintained by the Navy in reduced operating status and **ships maintained by MARAD** for use in a contingency. The latter are known as the **RRF** and its larger set, the **National Defense Reserve Fleet (NDRF)**. With very few exceptions, title to RRF and other NDRF ships are vested in MARAD’s parent organization, the DOT.

Commercial ships will be required to fill sealift requirements in virtually every major crisis situation.

DOD can obtain commercial shipping from the following sources: US flag commercial charters and liner service; foreign owned charter and liner service ships, used in accordance with existing laws and policies; ships/capacity committed to the VISA and/or Voluntary Tanker Agreement; US-owned ships, registered under certain flags, known as the effective US control fleet (EUSC); and militarily useful US-owned ships which are subject to requisitioning. Registry procedures between certain nations allow EUSC ships under the registries to be available to the US Government in a national emergency.

Employment of Sealift Forces

The employment of sealift begins in the execution planning phase and continues until the operation is terminated by proper authority or is completed.

This phase starts with the President and SecDef decision to exercise the military option for resolution of the crisis. Acting on the authority and direction of the Secretary of Defense, the Chairman of the Joint Chiefs of Staff will issue an execute order (EXORD) that directs the supported combatant commander to carry out the OPORD. The supported combatant commander then issues EXORDs to subordinate and supporting commanders directing they execute their supporting OPORDs. During this phase, changes to the OPORD may be necessary for some or all of the following reasons: strategic, operational, tactical, or intelligence considerations; force and nonunit cargo availability; availability of shipping; CONUS transportation system throughput capabilities; and port of embarkation and/or POD throughput capabilities.

To ensure optimum interoperability, sealift command, control, communications, and computer systems will be fully interoperable with the Global Command and Control System.

The inherent worldwide dispersal of sealift forces mandates interoperability with the Global Command and Control System in order to effectively plan, deploy, sustain, redeploy, and employ. Command and control of all common-user shipping is the responsibility of MSC. Protection of shipping under MSC operational control is the responsibility of the Navy component commander of geographic combatant commands when operating in their respective areas of responsibility. Communications capabilities in strategic sealift ships range from advanced military communications and on line cryptographic systems on some military-owned sealift ships to conventional high frequency and single side band voice capabilities.

Intermodal operations provide flexibility to facilitate rapid, efficient cargo movement.

Intermodal systems refer to the efficient interchange of standardized shipping containers between ocean and land carriers, sophisticated systems of container handling and storage in marine terminals, or container freight stations and computerized tracking of shipments. The advantages of such systems or operations include savings in transit time and delivered cost, and the arrival of perishables in better condition because of reduced transit times, particularly in moving large numbers of containers.

Naval Cooperation and Guidance for Shipping

In periods of crisis, conflict, national emergency or war, naval authorities may direct the movement of merchant ships (including routing and diversion) so that they may be better protected from hostilities and not interfere with possible active naval, joint, or

combined military operations. The naval cooperation and guidance for shipping (NCAGS) organization is the principal US resource to carry out this function. The purpose of NCAGS is to ensure the efficient management and safe passage of merchant ships that are not performing strategic sealift functions. The NCAGS mission is to assist the theater/operational commander in managing risk by providing situational awareness and near real-time clarity of the merchant shipping picture to help ensure the safe passage of merchant shipping and the safety of naval vessels or the nation in a crisis contingency.

CONCLUSION

This publication provides a comprehensive overview of several key areas of sealift that are considered essential for the successful employment of sealift in support of national military strategy. The publication covers the sealift mission and its functions in the area of strategic mobility; sealift forces, current sealift assets and programs; the joint and Service organizations for sealift; Service relationships with USTRANSCOM regarding sealift forces; the command and control system for employment of sealift forces; sealift support of the geographic combatant commander; and responsibility for planning, programming, and budgeting for sealift forces to meet national military objectives.

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CHAPTER I OVERVIEW

“Strategic sealift is the maritime bridge to ensure that heavy ground forces are delivered and that all land-based forces are supported and resupplied in a conflict.”

Secretary of the Navy John Dalton 1994

1. General

a. **This joint publication (JP) identifies, describes, and defines the sealift forces;** organization for command and control (C2) of sealift forces; responsibilities for sealift support of the Department of Defense (DOD), Chairman of the Joint Chiefs of Staff (CJCS), and combatant commands; procedures and responsibilities for the generation of sealift force assets and requirements; and doctrine for sealift planning, employment, and transition across the range of military operations. **Successful response to regional contingencies depends on sufficient strategic mobility assets** in order to deploy combat forces rapidly and sustain them in an operational area as long as necessary to meet US military objectives. **The strategic mobility triad of air mobility, sealift, and pre-positioning (PREPO) is shown in Figure I-1.** Each element of the triad has its own unique advantages and disadvantages, as shown in Figure I-2. In general, **air mobility transports light, high priority forces and supplies**, including personnel and equipment required to rapidly integrate units with PREPO elements' equipment and supplies.

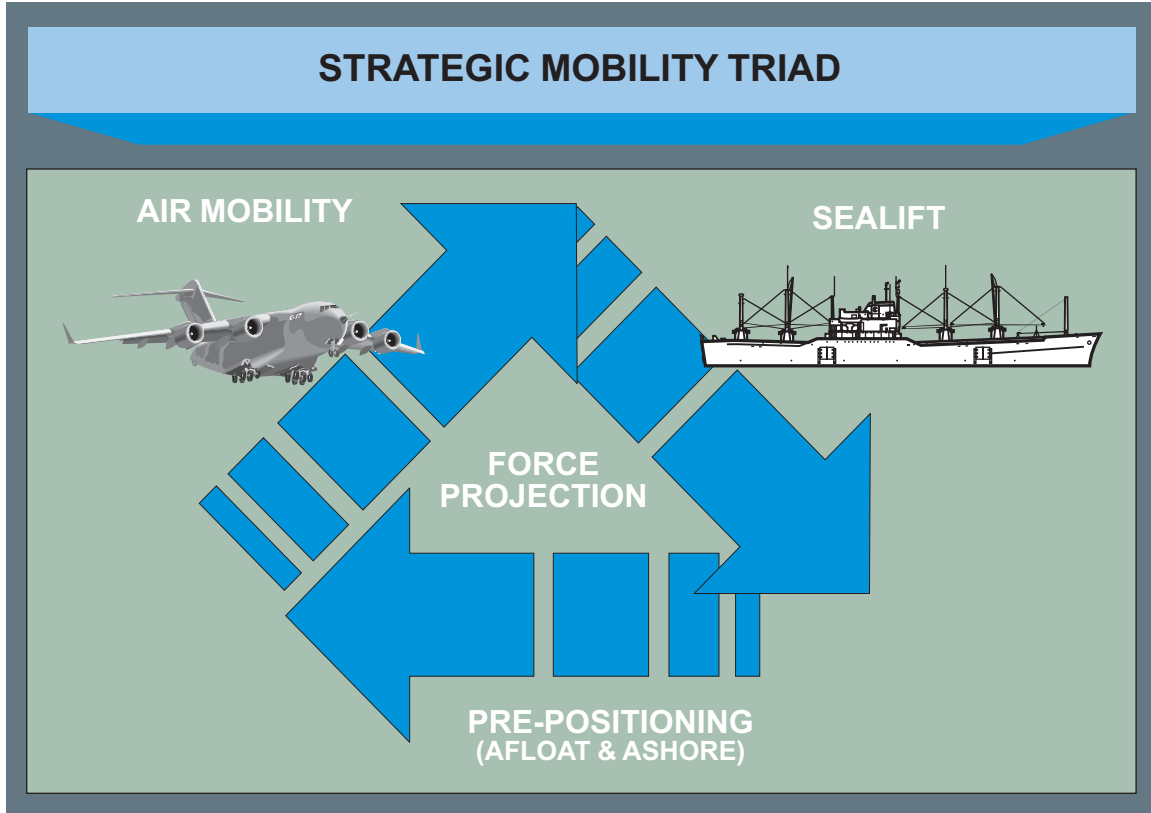


Figure I-1. Strategic Mobility Triad

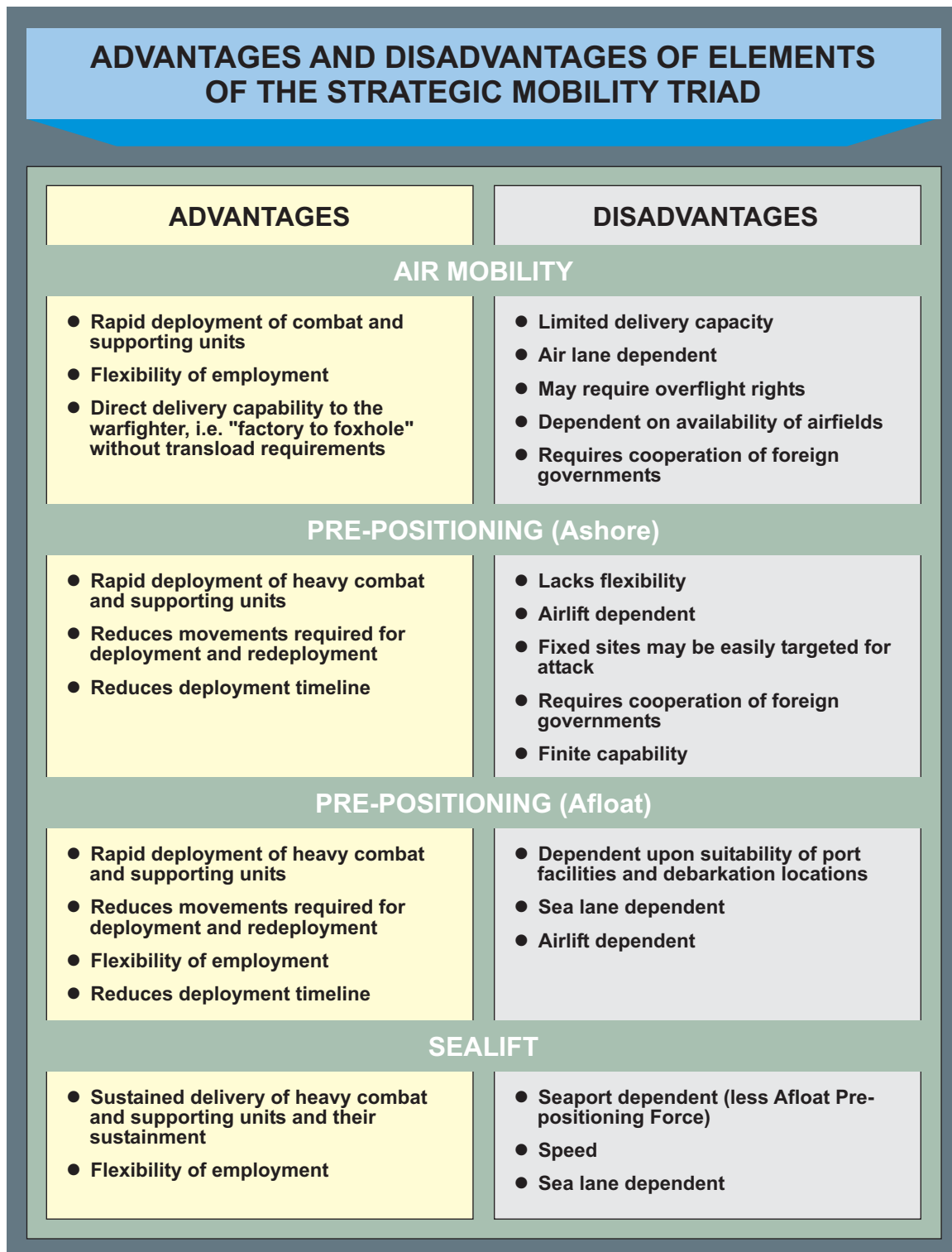


Figure I-2. Advantages and Disadvantages of Elements of the Strategic Mobility Triad

As an operation progresses, sealift delivers the heavy combat units and their support equipment as well as the vital sustainment for deployed forces.

b. In most cases, sealift accounts for the majority of the total cargo delivered to an operational area. To meet these requirements, sealift forces are employed in the **three phases of strategic mobility**, which are: **PREPO, deployment (or surge), and sustainment**. The relationship of each phase to the others in terms of time and quantities of material delivered is shown in Figure I-3.

2. The Sealift Trident

a. During large strategic deployment operations, sealift support is typically conducted in **three phases** as depicted in Figure I-4. **PREPO afloat is made up of ships from the afloat pre-positioning force (APF) of the Military Sealift Command (MSC)**. APF ships are discussed in greater detail in Chapter IV, “Sealift Assets.” The flexibility inherent in the APF provides the combatant commanders various force options to use when developing viable courses of action (COAs) to accomplish assigned tasks. While pre-positioned equipment and supplies aboard APF shipping are tailored to support the joint forces’ combat operations, these same capabilities can be used to support other types of joint military operations. On a very limited basis, selected items of these supplies and equipment may be provided to host nation (HN), other government agencies, or international organizations to support foreign humanitarian assistance or disaster relief operations. Applicable laws, regulations, reimbursement, and reporting procedures must be followed when providing support to foreign nations. These capabilities include the production, storage, and distribution of potable water; rations; shelter; bulk fuel operations; engineer support; and transportation services. Elements of the APF may be temporarily moved to take up position close to a potential employment area, either to signal national resolve during an evolving crisis or enhance the timely delivery of supplies and equipment upon the decision to deploy a decisive force.

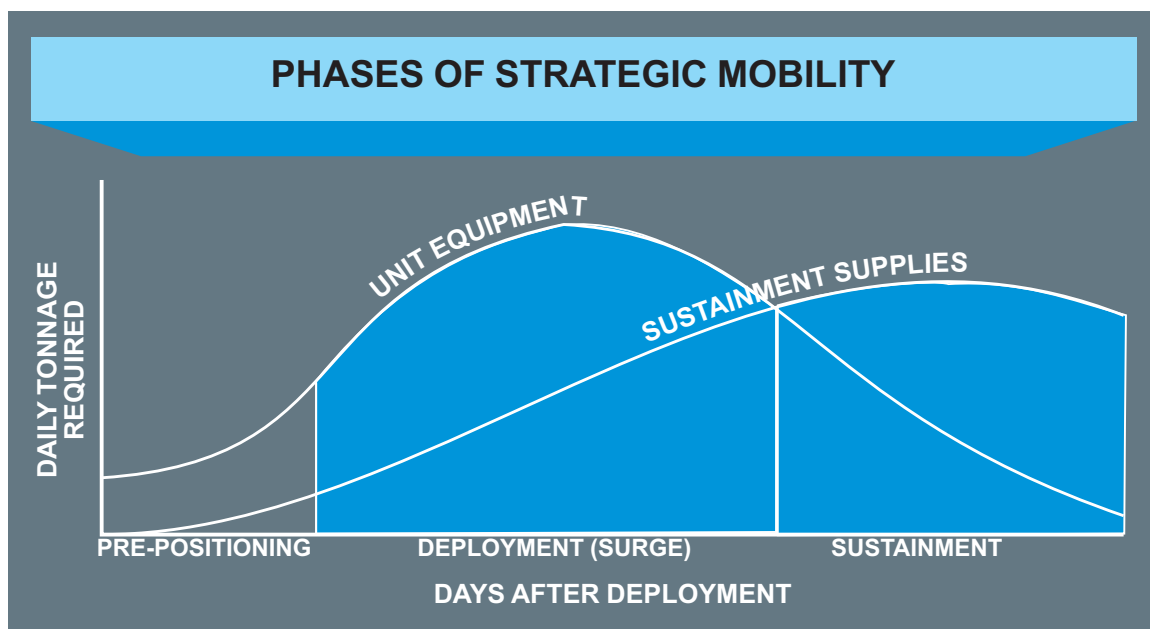


Figure I-3. Phases of Strategic Mobility

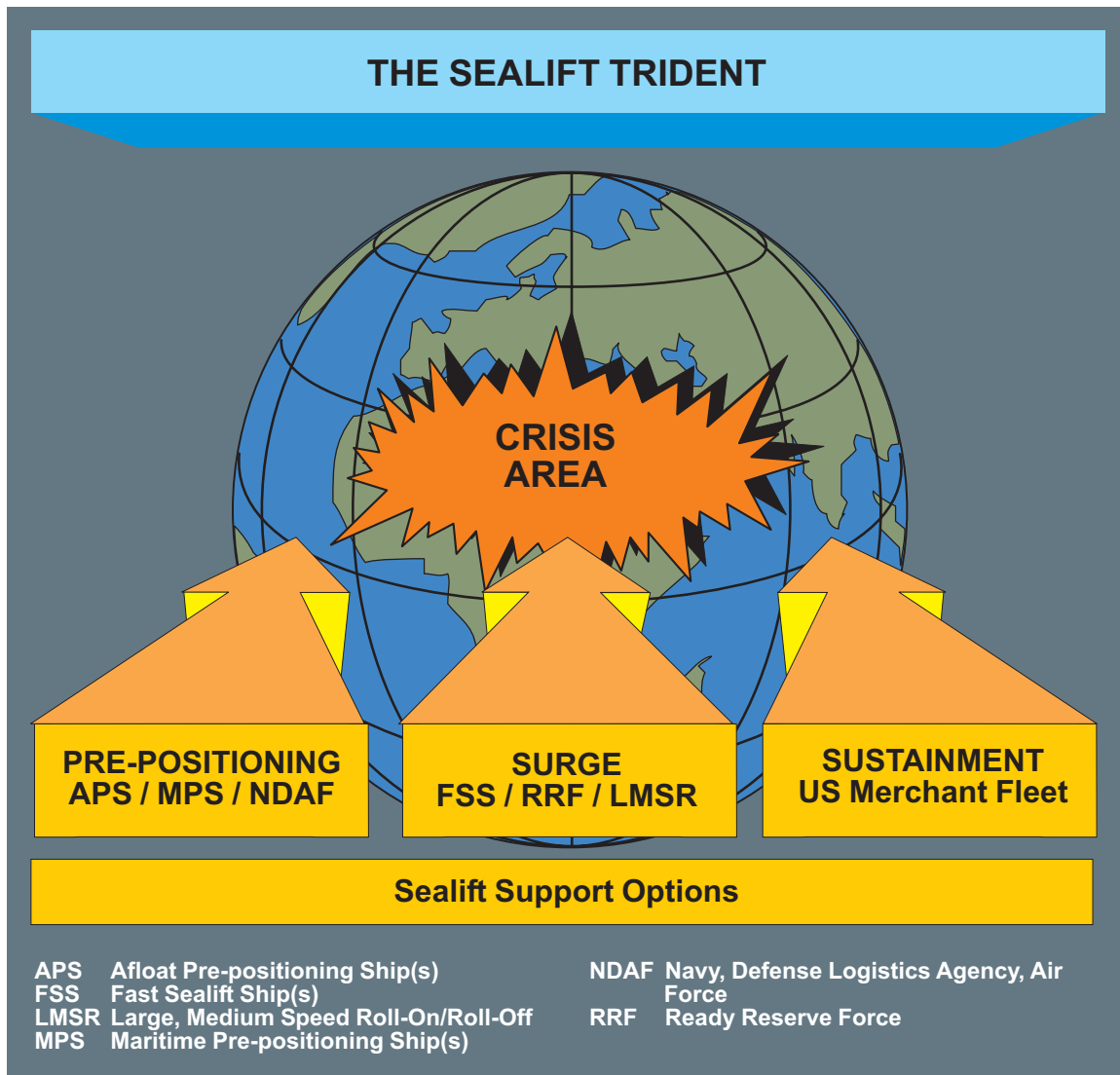


Figure I-4. The Sealift Trident

b. “Surge” includes ships from the United States Transportation Command (USTRANSCOM)-controlled fleet; for example, the fast sealift ship(s) (FSS), the Ready Reserve Force (RRF), large, medium speed roll-on/roll-off (RO/RO) (LMSR) vessels, and chartered shipping from the commercial market (when contracted by MSC, under the Navy’s authority, to support US forces). Surge shipping types are discussed in detail in Chapter V, “Vessel Acquisition and Activation Programs.” A robust and responsive surge fleet is a critical element of US national security strategy. The ability to move forces and military equipment enables the United States to defend and promote vital interests anywhere in the world. This is especially true as the nation continues to draw down its shore-based infrastructure overseas. For surge sealift, MSC first looks to the US market and then the foreign market to charter ships as mandated by law. If no suitable ships are available, government-owned ships may be activated. Surge shipping delivers the heavy combat power and accompanying supplies in order to facilitate the deployment of predominantly continental US (CONUS)-based forces to anywhere in the world.

c. Finally, **“sustainment” refers to shipping provided by the US merchant fleet**, mostly containerships, to deliver large quantities of resupply and ammunition to forward-deployed forces augmented as necessary by the government controlled assets. Sustainment shipping considerations are discussed in greater detail in Chapter VI, “Employment of Sealift Forces.” **All three portions of the sealift trident are distinct entities**, and removing any segment of the trident denies the joint force commanders (JFCs) the full range of sealift support options.

SEALIFT IN SUPPORT OF THE PERSIAN GULF

Key to the buildup and sustainment of forces was the workhorse of the strategic mobility triad sealift. Sealift in Operations DESERT SHIELD and DESERT STORM was composed of ships under MSC operational control as well as domestic and foreign ships under charter to MSC. The size and swiftness of the buildup required the United States to use almost every element of its sealift capability. Almost all Navy sealift elements were involved in the operation and they were supplemented by large numbers of chartered domestic and foreign ships. During the entire operation, 385 ships delivered unit equipment, related support, and petroleum products.

The sealift logistics deployment and sustainment effort took place in two phases. The first sealift phase extended from August to November [1990] and was designed to deploy and sustain forces to deter further Iraqi aggression. During that period, sealift moved the equipment of more than four Army divisions along with sustainment for the initial defensive support requirements. By September, more than 100 of TRANSCOM’s MSC-controlled ships had delivered the equipment and sustainment for the 100,000 US military personnel who had deployed to the theater. When the first sealift phase ended, more than 180 ships were assigned or under charter to MSC and nearly 3.5 million tons of fuel and 1.2 million tons of cargo had been delivered.

The second phase began in December and extended until the end of the conflict. By 15 January [1991], the total number of US forces deployed in the theater had more than doubled. From the beginning, while deploying a unit, ships were also loaded with sustainment supplies required by the forces in theater. By March, an average of 4,200 tons of cargo arrived in theater daily. The average one-way voyage for the Operations DESERT SHIELD and DESERT STORM sealift covered nearly 8,700 miles.

SOURCE: DOD Final Report to Congress
Conduct of the Persian Gulf War, April 1992

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CHAPTER II

ORGANIZATION AND RESPONSIBILITIES

“A shipload of war material delivered safely overseas [is] wasted if half the cargo consists of filler items not needed immediately.”

Richard Leighton and Robert Coakley
(on efficiency in transportation vs. effective supply)
Global Logistics and Strategy 1940-1943

1. General

DOD force structure is based on a highly trained, well-equipped, and mobile military force. The national security strategy depends heavily on our ability to transport personnel, equipment, and supplies worldwide. To ensure DOD’s ability to carry out its transportation missions effectively, **the Commander, United States Transportation Command (CDRUSTRANSCOM) provides common-user air, land (CONUS only), and sea transportation and common-user port management and terminal services to DOD.**

2. Forces and Authority

DOD Directive (DODD) 5158.4, 8 January 1993, *United States Transportation Command*, designates **CDRUSTRANSCOM as the DOD single manager for transportation** and common-user port management and terminal services for other than Service-organic or theater-assigned transportation assets. This directive also directs the Secretaries of the Military Departments (after coordination with the Chairman of the Joint Chiefs of Staff) to assign the Surface Deployment and Distribution Command (SDDC), MSC, and the Air Mobility Command, in time of peace and time of war, under CDRUSTRANSCOM combatant command (command authority) (COCOM). The authority and duty to organize, train, and equip forces for assignment to CDRUSTRANSCOM, and the associated programming and budgeting function, shall remain with the Secretaries of the Military Departments. With respect to sealift, CDRUSTRANSCOM is delegated authority to procure commercial transportation services and, with the approval of the Secretary of Defense (SecDef), to activate the RRF and the Voluntary Intermodal Sealift Agreement (VISA). Additionally, CDRUSTRANSCOM shall control the transportation accounts of the Transportation Working Capital Fund (TWCF).

3. Service-Organic, Theater-Assigned Transportation

As used in DODD 5158.4, *United States Transportation Command*, Service-organic or theater-assigned transportation includes sealift assets that are shown in Figure II-1.

4. Organizations and Responsibilities

a. It is DOD policy that traffic management and transportation single manager responsibilities be aligned to achieve optimum responsiveness, effectiveness, and economy. Specific sealift responsibilities follow.

SERVICE-ORGANIC OR THEATER-ASSIGNED TRANSPORTATION SEALIFT ASSETS

- Assigned to the Department of the Army as Army afloat pre-positioning (PREPO) ships (prior to the initial discharge of cargo);
- Assigned to the Department of the Navy as:
 - The special mission support force of missile range instrumentation ships, ocean survey ships, cable ships, oceanographic research ships, acoustic research ships, and naval test support ships;
 - The naval fleet auxiliary force of fleet ammunition ships, submarine surveillance ships, fleet stores ships, fleet ocean tugs, ballistic missile submarine support ships, and fleet oilers;
 - Hospital ships;
 - Marine Corps intermediate maintenance activity ships or;
 - Maritime PREPO ships (prior to initial discharge of cargo).
- Assigned to the Department of the Air Force as Air Force afloat PREPO ships (prior to the initial discharge of cargo); or
- Assigned to the combatant command (command authority) of a unified command (including the US Special Operations Command) other than Commander, US Transportation Command.

Figure II-1. Service-Organic or Theater-Assigned Transportation Sealift Assets

b. **Department of Defense.** The President and SecDef exercise authority and control of the Armed Forces of the United States through two distinct branches of the chain of command. One branch runs from the President, through the SecDef, to the commanders of combatant commands for missions and forces assigned to their commands. The other branch, used for purposes other than operational direction of forces assigned to the combatant commands, runs from the President through the SecDef to the Secretaries of the Military Departments. The authority vested in the Secretaries of the Military Departments in the performance of their role to organize, train, equip, and provide forces runs from the President through the SecDef to the Secretaries. This administrative control provides for the preparation of military forces and their administration and support, unless such responsibilities are specifically assigned by the SecDef to another DOD component. **The SecDef is responsible for transportation planning and operations with DOD.** Transportation-specific responsibilities include establishing and overseeing implementation of overall policy for effective and efficient use of DOD and commercial transportation resources, and establishing overall policy guidance governing the transportation account of the TWCF.

c. Chairman of the Joint Chiefs of Staff. The CJCS reviews and evaluates movement requirements and resources, apportions capability, and allocates capability when required. CJCS:

(1) Establishes procedures, in coordination with the Assistant Deputy Under Secretary of Defense (Transportation Policy), the Secretaries of the Military Departments, and the Defense Logistics Agency (DLA), for the submission of movement requirements by DOD user components to USTRANSCOM and for the submission of evaluated requirements and capabilities by USTRANSCOM and the transportation component commands to the CJCS.

(2) Prescribes a movement priority system in agreement with uniform materiel movement and issue priority system that will ensure responsiveness to meet the requirements of the using forces.

(3) Monitors the capabilities of USTRANSCOM common-user transportation resources to provide air mobility, sealift, CONUS land transportation, common-user ocean terminal service, and aerial port service based upon the requirements of DOD components.

(4) Assigns movement priorities in support of DOD components based upon capabilities reported by USTRANSCOM.

(5) Apportions intertheater air mobility assets through the Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3110.01 Series, *Joint Strategic Capabilities Plan (JSCP) for Fiscal Year (FY) 2002*, and CJCSI 3110.11E, *Mobility Supplement to the Joint Strategic Capabilities Plan for FY 2002*. Apportions strategic lift assets through the execute order to the supported combatant commander.

(6) Adjudicates competing lift requirements as requested by USTRANSCOM or the CJCS Joint Transportation Board (JTB).

(7) Acts on the recommendations of the CJCS JTB with respect to the establishment of priorities and allocations for the use of air mobility, sealift, and surface transportation capability.

d. The Military Departments retain the responsibility for organizing, training, equipping, and providing the logistic support (including Service-organic transportation) of their respective forces. These forces and other DOD agencies must depend on common-user military transportation services. In this role, the Army, US Navy (USN) (including US Coast Guard [USCG] when appropriate), US Air Force (USAF), US Marine Corps (USMC), DLA, and other DOD agencies are all generically called “shipper services.” Each Service is responsible for establishing transportation policy for the movement of equipment and supplies funded by the applicable shipper service and for administrative support and performance of transportation operations assigned by combatant commanders at either their local shipping installations or throughout the theater. They are also responsible for maintaining trained personnel who can participate in joint planning and provide Joint Operation Planning and Execution System (JOPES) inputs. Specifically, with respect to sealift, the Secretaries are responsible as follows:

(1) **The Secretary of the Army** will establish and control such installation and port activities as may be necessary for the operation and administration of SDDC. Other tasks include:

(a) Providing acquisition authority to SDDC by designating Commander, SDDC as Head of Contracting Activity for the Army to support CDRUSTRANSCOM.

(b) Providing litigation and legal support for actions arising from contracts issued or administered by SDDC in support of CDRUSTRANSCOM.

(2) **The Secretary of the Navy (SECNAV)** will establish, organize, train, and equip MSC as a jointly staffed major command of the USN for assignment to CDRUSTRANSCOM. SECNAV will obtain CDRUSTRANSCOM approval on organizational changes within MSC that may impact the ability of CDRUSTRANSCOM to carry out assigned responsibilities. SECNAV will coordinate with CDRUSTRANSCOM on the assignment of new missions to MSC and ensure MSC is able to meet its assigned USTRANSCOM functions without degradation. Other tasks include:

(a) Coordinating with CDRUSTRANSCOM Navy requirements for shipping support to be drawn from the RRF.

(b) Providing acquisition authority to MSC by designating Commander, Military Sealift Command (COMSC) as Head of Contracting Activity for the Navy to support CDRUSTRANSCOM.

(c) Providing litigation and legal support for actions arising from contracts issued by MSC in support of CDRUSTRANSCOM.

(d) Assigning to MSC Service-unique missions or assets.

e. Commander, US Transportation Command. Specific CDRUSTRANSCOM responsibilities with respect to sealift are shown in Figure II-2. As the focal point for transportation for DOD, the CDRUSTRANSCOM:

(1) Provides transportation and common-user port management and terminal services for DOD as well as non-DOD agencies upon request.

(2) Exercises COCOM of all assigned forces as authorized by the “Force for Unified Commands” Memorandum. (Reserve Component forces only when mobilized or ordered to active duty for other than training.)

(3) Exercises responsibility for global air, land, and sea transportation planning (deliberate and crisis action).

(4) Acts as DOD focal point for items in the transportation system.

RESPONSIBILITIES OF THE COMMANDER, US TRANSPORTATION COMMAND

- Exercise combatant command (command authority) of sealift forces, to include organizing and employing forces to carry out missions in support of other unified commands.
- Coordinate and implement Transportation Working Capital Fund operational procedures in association with component comptrollers of Military Departments and Office of the Secretary of Defense; provide guidance for standardization of rates, regulations, operational policies, and procedures.
- Apply assigned/allocated strategic sealift resources as directed by the Chairman of the Joint Chiefs of Staff, ensuring effective use.
- Procure commercial transportation services (including lease of transportation assets) in accordance with applicable laws as necessary to conduct the US Transportation Command mission.
- Establish and maintain relationship between the Department of Defense and the commercial transportation industry to develop concepts, requirements, and procedures for the Sealift Readiness Program; these procedures, as well as the execution of Voluntary Intermodal Sealift Agreement (VISA) Program, take effect upon the approval of the Secretary of Defense.
- With the approval of the Secretary of Defense, activate strategic sealift reserve/mobilization programs including the Ready Reserve Force, Sealift Readiness Program, VISA, and the Volunteer Tanker Agreement.
- Coordinate and provide oversight for the joint logistics-over-the-shore program.
- Coordinate with the Maritime Administration and provide guidance on requirements issues as necessary.
- In coordination with other agencies, provide direction and oversight for all matters dealing with the transportation of hazardous material.
- Have the authority to provide management support for Service-organic or theater-assigned transportation assets as requested by the Secretaries of the Military Departments and the commanders of unified commands at the direction of the Secretary of Defense or when the Commander, US Transportation Command (CDRUSTRANSCOM) and the Service Secretary or commander concerned so agree.
- Make recommendations to the Service Secretaries via the Chairman of the Joint Chiefs of Staff concerning the capability, characteristics, design, and other requirements for mobility assets needed for CDRUSTRANSCOM's mission.
- Designate continental United States (CONUS) seaports of embarkation and debarkation for deploying/redeploying forces and sustainment during planning and execution; make recommendations to the geographic combatant commanders for designation of seaports outside CONUS that might be used in military operations.

Figure II-2. Responsibilities of the Commander, US Transportation Command

(5) Exercises responsibility for intertheater (non-theater assigned) aeromedical evacuation.

(6) Oversees the responsibilities listed below:

(a) Providing combatant commanders with the coordinated transportation planning expertise required during the deliberate planning process. This includes reviewing the Joint Strategic Capabilities Plan (JSCP) tasking, analyzing supported combatant commander requirements registered in JOPES (force and non-unit cargo and/or personnel) for transportation feasibility, and advising the supported combatant commander of changes required to produce a force and sustainable deployment concept. Upon approval of the supported combatant commander's operation plan (OPLAN), provide plan maintenance support as required.

(b) Providing deployment estimates and total lift assets availability to the President, SecDef, and supported combatant commanders for development of alternative COAs and optimal flow of forces during crisis action planning. CDRUSTRANSCOM will also advise the supported combatant commanders and the CJCS concerning use of, or changes to, lift capabilities.

(c) During deployment, assisting the supported combatant commanders in ensuring that validated movement requirements are routed and scheduled for maximum support. During sustainment, redeployment, and reconstitution, the CDRUSTRANSCOM will also consider efficient use of intertheater lift resources. The CDRUSTRANSCOM will assist the CJCS by recommending reallocation of intertheater assets to optimize their use and support plan execution during deployment, employment, reconstitution, redeployment, and sustainment. The CDRUSTRANSCOM refers problems with recommended COAs to the CJCS JTB for resolution or adjudication if a balance of transportation requirements and capabilities cannot be maintained.

(d) As Executive Agent for DOD Customs, interface with the US Customs Service, State Customs and Agriculture officials, US Department of Agriculture, Animal and Plant Health Inspection Service, and Plant Protection and Quarantine for customs and agriculture inspections of DOD personnel, material, and equipment returning to CONUS.

(e) Developing and maintaining integrated in-transit visibility (ITV) capability for DOD. The Global Transportation Network (GTN) provides that capability and is the designated ITV system for DOD. GTN also provides C2 functionality for USTRANSCOM and is integrated into the Global Command and Control System (GCCS) and the Global Combat Support System. GCCS is a national C2 system.

For additional information on GCCS, refer to JP 6-0, Doctrine for Communications System Support to Joint Operations.

(f) Developing policies and procedural guidance through the combatant commanders, in collaboration with the DOD components, US Government (USG) border clearance activities, and foreign governments, to ensure efficiency and uniformity in the implementation of the DOD Military Customs and Border Clearance Program.

f. Military Surface Deployment and Distribution Command. SDDC is a major command of the US Army. As the Army component of USTRANSCOM, SDDC is the CONUS transportation manager and provides worldwide common-use ocean terminal services and traffic management services to deploy, employ, sustain, and redeploy US force on a global basis. These services also include the use of common-user sealift through the VISA program. SDDC also conducts transportation engineering to ensure deployability and feasibility of present and future deployment assets. Additionally, SDDC is the seaport manager under the single port manager concept for all common-user seaports of embarkation (SPOEs) and/or seaports of debarkation (SPODs). When designated (e.g., using stevedoring services contracts of host-nation support [HNS]), SDDC will also serve as the port operator. SDDC's Transportation Engineering Agency (SDDCTEA) provides deployment engineering, research, and analytical expertise to improve the deployability of the Armed Forces of the United States. SDDCTEA executes surface transportation engineering policy matters assigned by the Office of the Secretary of Defense on behalf of USTRANSCOM and SDDC Headquarters (HQ). SDDCTEA also provides a focal point for developing Defense Transportation System (DTS)-related modeling and simulation tools. Sealift-related responsibilities, subject to the direction and control of USTRANSCOM, are as follows:

(1) Providing deliberate and crisis action planning support to CDRUSTRANSCOM to ensure effective use of CONUS common-user ocean terminals and other CONUS transportation assets.

(2) Providing traffic management, CONUS surface transportation, and CONUS common-user ocean terminal support to supported combatant commanders.

(3) Negotiating ocean and intermodal rates and procuring cargo space on ships and related services to meet DOD ocean and intermodal transportation requirements.

(4) Recommending diversions of cargo and passengers within DTS.

(5) Evaluating cargo throughput capability of CONUS common-user ocean terminals to be used for unit deployment.

(6) Providing those functions necessary to control the strategic flow of cargo and information between SPOE and hand-off to the geographic combatant commander. Assigning workloads to the port operator based on the combatant commander's priorities. Operating the Worldwide Port System, contracting for port services, and documentation.

(7) Providing freight traffic management services and obtaining freight transportation rates and services from commercial for hire transportation companies, including inland waterway and coastal carriers. Providing routing, rates, and performance quality control.

(8) Providing ocean cargo booking and contract administrative services for sealift cargo for DOD components.

(9) SDDCTEA provides deployment engineering, research, and analytical expertise to improve the deployability of Armed Forces of the United States. SDDCTEA executes surface transportation engineering policy matters assigned by the Office of the Secretary of Defense on behalf of USTRANSCOM and SDDC HQ. They also provide a focal point for developing DTS related modeling and simulation tools.

g. **Military Sealift Command.** MSC is a major command of the USN. As the Navy component of USTRANSCOM, MSC provides common-user and exclusive use sealift transportation services to deploy, employ, sustain, and redeploy US forces on a global basis. MSC consists of the HQ, area commands, field offices, operational commands, and liaison offices. **MSC functions include operating and maintaining MSC forces as directed and serving as the Navy administrative commander for MSC forces.** MSC-specific sealift tasks, subject to the direction and control of USTRANSCOM, are as follows:

(1) Providing deliberate and crisis action planning support to USTRANSCOM, ensuring effective use and control of common-user sealift.

(2) Providing ocean transportation and support services to DOD components as required by CDRUSTRANSCOM.

(3) Ensuring effective use and control of government- and commercial-owned ocean transportation services for DOD.

(4) Informing CDRUSTRANSCOM and SDDC as to the availability of commercial and MSC-controlled lift capability.

(5) Recommending to CDRUSTRANSCOM activation of the RRF ships and activation of VISA.

(6) On behalf of CDRUSTRANSCOM, administering and executing the VISA, exercising operational oversight of the RRF in concert with Maritime Administration (MARAD) and over ships requisitioned, and exercising mission control of those forces when transferred to CDRUSTRANSCOM.

(7) Preparing forecasts of ocean and maritime common-user transportation services based on DOD component requirements.

(8) Acting as CDRUSTRANSCOM scheduling authority for sealift support of DOD requirements.

(9) Coordinating MSC operations with appropriate port authorities.

(10) Providing sealift for passengers on government-owned and/or -controlled or commercial ships as required.

(11) In coordination with USTRANSCOM, developing program and budget submissions for strategic sealift system requirements.

(12) Performing missions and tasks as directed by CDRUSTRANSCOM. Keeping CDRUSTRANSCOM informed of Service assigned missions and employment use of strategic sealift assets.

h. **Maritime Administration.** MARAD is an agency within the Department of Transportation (DOT) responsible for assuring that US Merchant Marine shipping is sufficient to meet the needs of national defense in times of war or national emergency, and can also support the domestic and foreign commerce of the United States. MARAD administers programs to meet sealift requirements determined by DOD and conducts related national security activities. MARAD functions include maintenance of ships in MARAD custody; administration of subsidy programs and other financial aids to shipping; maritime research and development; and training of US merchant marine officers. MARAD also functions as the National Shipping Authority (NSA) of the United States, the emergency shipping operations agency tasked to acquire and manage merchant shipping for government service in time of war or in defense-related emergencies. MARAD also conducts national security planning, training, and operations in areas such as emergency communications, naval coordination and protection of shipping, war risk insurance, and port emergency operations. In peacetime, MARAD provides ship inventory and characteristics information as well as estimates of ship forecasts for use in DOD planning. In turn, DOD provides MARAD with information on defense shipping requirements. In a contingency, DOD advises MARAD of time-phased requirements for ships by type. MARAD provides DOD with the required ships by activation of reserve vessels and through various government programs, including VISA, voluntary tanker agreement (VTA), and requisitioning. In a North Atlantic Treaty Organization (NATO) crisis, MARAD would be responsible for obtaining the NATO ships committed under the NATO Reinforcement Shipping Agreement.

FAST SEALIFT SHIPS

The Fast Sealift Ships (FSS) performed particularly well [during DESERT SHIELD and DESERT STORM] in their part of the overall logistics effort, doing more relative to their numbers than any other type of sealift asset. FSSs have both RO/RO and limited container capabilities and are a rapid and versatile transportation means for unit equipment. They have a larger capacity than breakbulk ships and require less time to load and unload. However, there are only eight FSS ships, thus availability was limited. Unfortunately, one FSS, the *Antares*, failed off the east coast of the United States with a considerable amount of the 24th Infantry Division (Mechanized) equipment aboard. The ship was towed to Spain. Some of the cargo was airlifted to Saudi Arabia but most had to be unloaded and reloaded aboard another FSS returning from her initial voyage. This cargo arrived about three weeks later than planned. (Before the war, the *Antares* had been scheduled for major overhaul, but this was delayed. Thus a degree of risk was accepted in the decision to use *Antares* to speed the deployment.)

The FSS size and speed allowed the remaining seven ships to deliver more than 13 percent of the total cargo of the unit equipment. FSS carried the 90,000 short tons of equipment for the 24th Infantry Division (Mechanized) at average speeds of 27 knots. Although normally on 96-hour standby, the first FSS was ready to deploy in 48 hours. The typical FSS load included more than 700 Army vehicles such as M-1 tanks, M-2 fighting vehicles, and fuel trucks. By comparison, 116 World War II Liberty Ships would have been required to move the same tonnage in the same period.

**SOURCE: DOD Final Report to Congress
Conduct of the Persian Gulf War, April 1992**

i. **Coast Guard.** USCG, an agency of Department of Homeland Defense, is a branch of the Armed Forces of the United States. It is specifically authorized to assist DOD in the performance of any activity for which the Coast Guard is especially qualified. **National defense, maritime safety, maritime law enforcement, and maritime environmental protection are the four major roles of the USCG. During joint force deployment and redeployment operations, the USCG can assist in providing force protection of military shipping at US SPOEs and overseas ports of debarkation (PODs) by conducting port security and harbor defense operations.** Major cutters are deployed to participate in enforcement of sanctions, maritime intercept operations, and peace operations. The major cutters of the USCG, as are Navy combatants, are self-sustaining during deployments in support of joint force operations. However, deploying port security units and supplies for sustainment must be time-phased to support Navy component operations and entered on the joint force time-phased force and deployment data (TPFDD) by supported combatant command planners for scheduling of common-user lift. The Coast Guard/naval expeditionary “harbor defense package” provides an integrated layered defense for shipping in the SPODs. The deployable harbor defense package includes a port security unit; a harbor defense command unit; a mobile inshore underwater warfare unit; an explosive ordnance disposal team; two visit, board, search and seizure teams; two patrol boats; and a high endurance cutter with its embarked helicopter. Also, the USCG is unique among the US military forces in that it has statutory law enforcement authority. In the US, the USCG is responsible for assuring the safety and security of US ports and waterways and enforcing vessel cargo and waterfront facility regulations; inspecting vessels (including those of the RRF); licensing mariners; enforcing customs laws; establishing and servicing aids to navigation; regulating and administering bridges over navigable waterways; port emergency response; search and rescue; operation of vessel traffic services in selected ports; and establishing safety and security zones.

j. **Joint Transportation Board.** The CJCS JTB may be convened by the CJCS during wartime or contingencies for ensuring President and SecDef requirements for all common-user transportation resources assigned or available to DOD are apportioned and scheduled to optimize accomplishment of DOD objectives. When convened, the CJCS JTB acts for the CJCS to communicate President and SecDef priorities and adjudicate competing requirements for intertheater mobility lift assets and/or resolve other issues that negatively impact the DTS and which USTRANSCOM and the supported combatant commander(s) are unable to resolve.

USTRANSCOM allocates transportation assets to supported combatant commanders' validated requirements in accordance with the CJCS apportionment guidance and priority assigned to each operation and/or requirement. USTRANSCOM advises the Joint Staff operations directorate and logistics directorate when movement requirements exceed capabilities. The CDRUSTRANSCOM will refer problems with recommended COAs to the CJCS for resolution or adjudication if a balance to transportation requirements and capabilities cannot be maintained. Should additional support be required to resolve lift shortfalls, the CJCS JTB may be convened to analyze proposed solutions and develop recommended COAs for CJCS approval. Combatant commanders could establish a theater JTB to resolve similar issues.

For further information concerning the organization, responsibilities, management, and procedures of a JTB see JP 3-35, Joint Deployment and Redeployment Operations, and JP 4-01, Joint Doctrine for the Defense Transportation System.

k. Geographic Combatant Commanders

(1) **General.** Geographic combatant commanders, in coordination with CDRUSTRANSCOM and other supporting commanders, are responsible for the deployment of forces assigned from origin to destinations.

(2) **Plan Development.** In response to taskings by the CJCS, geographic combatant commanders develop a concept of operations (CONOPS) using the forces and assumptions made available for planning in the JSCP. Subordinate component commanders then determine their specific force requirements, logistic requirements, and personnel replacements with recommended time phasing. Supported and supporting commanders' planners integrate component requirements and develop the TPFDD, which identifies force requirements to support a particular OPLAN and provides routing data from origin to destination. Movement requirements are analyzed to determine transportation feasibility using available assets apportioned in the CJCSI 3110.11 series, *Mobility Supplement to Joint Strategic Capabilities Plan*. After final refinement, the total requirement becomes part of the JOPES database.

(3) **Joint Movement Center (JMC).** An effective theater movement control option recommended to geographic combatant commanders is the establishment of a JMC. The JMC is responsible for coordinating the employment of all modes of theater transportation (including that which is provided by allies, coalition partners, or the HN) to support the theater CONOPS. The JMC should also be the single coordinator of strategic movements between the combatant commander and USTRANSCOM and should oversee the execution of theater transportation priorities.

For additional information on the JMC and theater movement control, refer to JP 4-01.3, Joint Tactics, Techniques, and Procedures for Movement Control.

(4) **Theater-Joint Transportation Board (T-JTB).** Because transportation is a critical asset in any operation requiring the movement of military forces, combatant commands need the ability to allocate available transportation resources rapidly. To react immediately during an

emergency or war, procedures should be established during peacetime by each command. Therefore, combatant commanders should establish a T-JTB to address apportioned transportation among components for unit movement, non-unit movement, and resupply. This action should be initiated as close to the beginning of a deployment as possible in order to preclude confusion, backlogs, and deconflict commercial competition, US military, and other demands on in-theater transportation assets.

CHAPTER III PLANNING

“Sealift is absolutely essential to deploy and sustain large military forces in hostile operations over global distances There is no substitute for sealift in our national strategy of forward defense.”

Everett Pyatt, Assistant Secretary of the Navy (Shipbuilding and Logistics) 1989

1. General

a. The actual or contemplated use of sealift assets leading up to and during a crisis or conflict involves significant operational considerations, each of which must be the subject of detailed planning. **Operational considerations** lead to a great many combinations of ships that may be considered for prompt delivery of unit equipment and other cargo to their destinations. Numerous factors enter into the determination of which combination, from among several possible combinations of vessels, can deliver the total movement requirement in the shortest time. The amount of time available significantly influences the planning process. **Supporting strategic transportation requirements** is a four-step process, as shown in Figure III-1. The four steps are:

- (1) To determine the cargo and sustainment movement requirement.
- (2) To state the requirement in the appropriate units of measure.
- (3) To simulate the deployment using available forces.

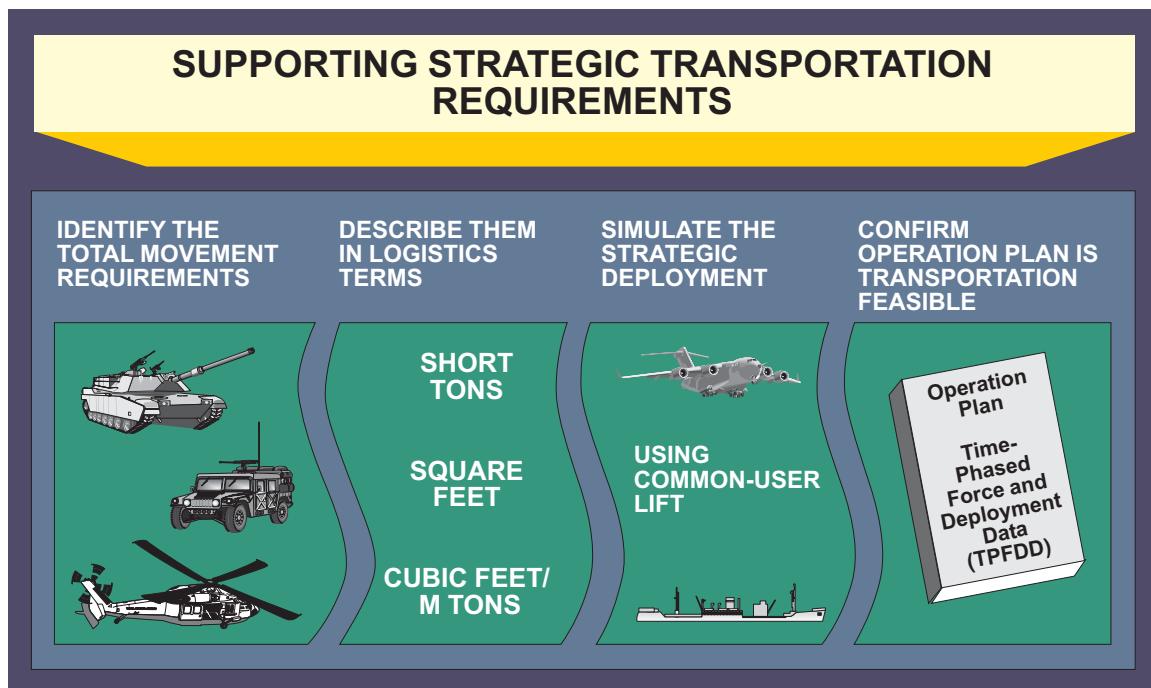


Figure III-1. Supporting Strategic Transportation Requirements

(4) To confirm that the plan is transportation feasible.

b. The planning process for deliberate and crisis action planning is more fully described in the Chairman of the Joint Chiefs of Staff Manual (CJCSM) 3122 Series on JOPES.

2. The Joint Operation Planning Process

a. The joint operation planning process is a coordinated process used by a commander to determine the best method of accomplishing a mission.

b. **Joint Operation Planning and Execution System. JOPES is used to conduct joint planning.** JOPES contains five basic planning functions — threat identification and assessment, strategy determination, COA development, detailed planning, and implementation. It is an integrated joint conventional C2 system used to support sealift operation monitoring, planning, and execution activities. JOPES is used to track requirements, departures, and arrivals in the much larger DTS.

c. **JOPES Database.** The deployment database in JOPES **consists of requirements that are time-phased and prioritized** according to stated needs. This information is detailed and includes unit or commodity size, weight, origin, destination, and required delivery date, and is updated by the planners as directed by the Chairman of the Joint Chiefs of Staff. The deliberate planners provide the requirements and priorities. In the next phase, USTRANSCOM planners input the time-phased requirements into automated data processing programs that provide transportation schedules for the particular plan. When an execute order (EXORD) is given, USTRANSCOM and its components enter into the JOPES database loaded for that plan. As units and supplies move from bases or depots to loading ports, each component updates the database with real-time data.

3. Execution Planning

a. This period may be weeks, days, or even hours in length depending on the political situation and scenario. During this period, USTRANSCOM and its component commands, MSC and SDDC, **identify the sealift forces required** for execution of the operation order (OPORD) and **tentatively schedule the sealift** to move the earliest deploying units. In general, USTRANSCOM and its component commands are responsible for ensuring that adequate transportation is available to support the OPORD when executed, developing feasible transportation schedules, establishing initial and follow-on requirements for sealift capability, resolving transportation shortfalls, adjudicating transportation allocation conflicts with the JTB, and publishing transportation coordinating instructions.

b. **Sealift Application.** In a crisis, strategic sealift divides into three broad categories: PREPO; surge shipping during initial mobilization; and resupply and sustainment shipping. PREPO with ships of the SPF reduces closure times of combat and support forces needed in the early stages of a crisis. **Surge shipping** must be capable of handling outsized and heavy items of equipment. These include large numbers of wheeled and tracked vehicles and helicopters, for

which RO/RO ships are most suitable. Containerships should not be overlooked in surge operations as they may have the capability to transport light combat, combat support (CS), and combat service support (CSS) equipment. **Resupply and sustainment shipping** moves the equipment, parts, and supplies necessary to sustain the force. It transports mainly containerized cargo and petroleum, oils, and lubricants (POL) products.

c. **Service Requirements.** The methods by which forces are introduced into an operational area vary from Service to Service. **Strategic sealift of accompanying supplies for Army and/or Air Force units is normally point-to-point unless otherwise specified by the combatant commander**, so that any sealift asset assigned by MSC to move cargo from SPOE to SPOD is satisfactory if the combatant commander's force closure requirements can be met. However, this is not always true for Marine Corps forces. The expeditionary Marine forces, as an integral component of a larger naval force, can influence events within the world's littorals using the sea as maneuver space and as a secure operating base. Seabasing enables forces to move directly from ship to inland objectives. It also permits Marine forces to commence sustainable operations to enable the flow of follow-on forces into theater. During Operation ENDURING FREEDOM, Marine forces operated over 400 miles inland while being supported from the sea. Whenever expeditionary units of a significant size Marine air-ground task force (MAGTF) are employed, assault follow-on echelon (AFOE) sealift must be provided for long-term operations; short-term or voyage charters will not suffice. The AFOE is more fully explained in Chapter VI, "Employment of Sealift Forces."

d. **Resource Capability.** When arranging the duration of supporting sealift assets, it is very important to **match sealift asset capabilities with Service orientation**. For example, some RRF ships are self-sustaining, meaning that they can discharge to lighterage offshore. It follows that these RRF ships are highly suitable for amphibious operations. Furthermore, because they are government-owned, their assured availability makes it feasible to plan and train with them in preparation for a contingency. On the other hand, the several large RO/ROs in MSC's peacetime controlled fleet as well as the FSS with their RO/RO capabilities are better suited for immediate assignment and point-to-point delivery.

e. **Mobility and Transportation Planning.** The JSCP Mobility Supplement provides **planning guidance to combatant commanders** regarding strategic sealift. Specific questions regarding asset availability and responsibilities for planning certain facets of sealift (Marine Corps AFOE, for example) can be answered by consulting the JSCP.

4. Sealift Asset Planning

CJCSI 3110.11, *Mobility Supplement to the Joint Strategic Capabilities Plan for FY 2002*, presents information and guidance on sealift assets for two nearly simultaneous major combat operations and their capability to support time-phased transportation requirements. Shipping is divided into two broad categories: common-user and withhold. Common-user assets are available for joint support of all Services' movement requirements. Withhold vessels are reserved for specific purposes and not generally available to transport joint movement requirements. Planning

for ships designated as maritime PREPO force and Navy Combat Logistics Force as well as other sealift planning factors are covered in the JSCP Mobility Supplement.

5. Basic Cargo Planning Concepts

a. Before proceeding with sealift planning, the joint planner must understand several basic concepts of cargo handling and stowage. These are: different measures of ship capacity; broken stowage; stowage factor or cargo density; and units of cargo measurement.

b. **Measures of Ship Capacity.** The cargo carrying ability of a vessel may be expressed in one or more units of measure (see Figure III-2).

c. **Broken Stowage.** Broken stowage is cargo space left unoccupied after the ship is considered “fully” loaded. This occurs because cargo sizes and shapes do not conform to those of the ship’s cargo compartments and because of the space required for cargo bracing and tie-down to prevent shifting and damage during the voyage. **It is expressed as a percentage of the total volume available for cargo stowage (bale cubic).** For RO/RO ships, the broken stowage

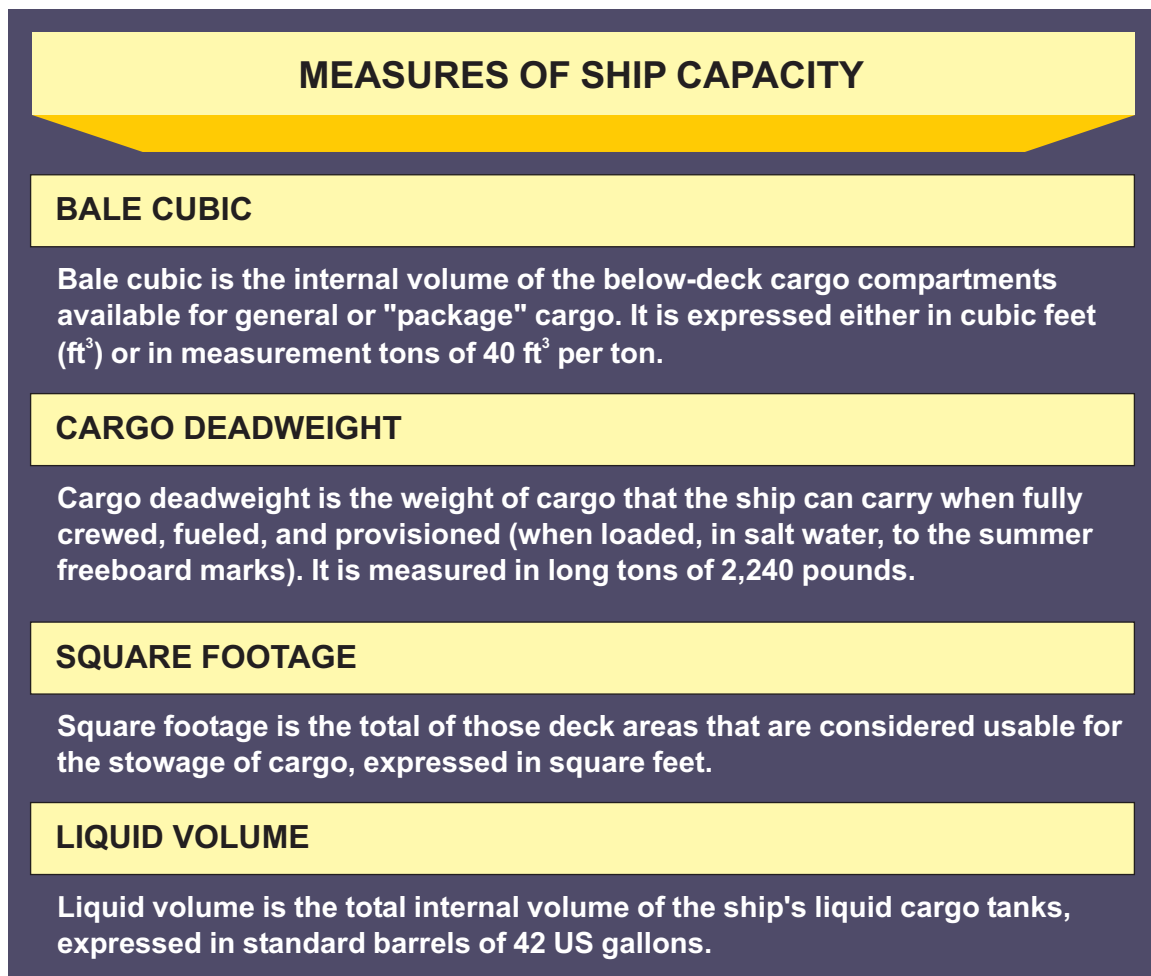


Figure III-2. Measures of Ship Capacity

is normally estimated to be 25-35 percent, indicating that the cargo actually occupies 65-75 percent of the total available load space, even though individual cargo spaces/holds are full. The amount of broken stowage is specific to each ship type, the cargo characteristics, and the load plan.

d. **Stowage Factor.** Stowage factor is the number of cubic feet (ft³) occupied by 1 long ton (LT) (2,240 pounds [lbs]) of any given cargo, without allowance for broken stowage. For a given item or commodity, **it is computed as follows:** $\text{Cargo Stowage Factor (ft}^3\text{/LT)} = \text{Cargo Density (lb/ft}^3\text{)} / 2,240 \text{ (lb/LT)}$. The stowage factor, in combination with the estimated percentage of broken stowage, can be used to estimate either the space required for loading a given cargo, or the amount of cargo that can be loaded aboard a given ship. It also can be used to maximize the utilization of both the cargo space (bale cubic) and weight capacity (cargo deadweight) of available shipping. **General cargo ships are typically designed to be “full and down” when loaded with cargoes having an average stowage factor of 40 cubic feet per LT (or 1 measurement ton [MT] per LT).** Cargoes with relatively high stowage factors (i.e., low densities) will fill the ship by volume before its weight capacity is reached. Conversely, cargoes with relatively low stowage factors (high densities) will bring the ship “down” to its deepest allowable draft before it is “full.”

e. **Units of Cargo Measurement.** In determining sealift transportation requirements, **the appropriate units of measurement will vary with cargo type and stowage factor** (see Figure III-3). For vehicles and other nonstackable cargo, area square feet is the relevant measurement. For stackable cargoes, stowage factors will determine whether weight (LT) or volume (MT) is the more appropriate.

f. **Sealift Planning Factors.** For planning purposes, ships of various types may be assumed to have, on the average, the notional cargo capacities shown in Figure III-4. As noted above, cargo characteristics will determine whether area, weight, or volume is the appropriate consideration in loading general purpose vessels (breakbulk ships and barge carriers). A single criterion applies to each of the more specialized designs: area, in the case of the RO/RO, and volume, for the containership.

6. Force Protection and Operations Security

a. MSC ships have virtually no self-protection capability, particularly against nuclear, biological, or chemical agents. **Unprotected ships are faced with the risk of loss of ship, cargo, and personnel** while operating in any area where a credible military, terrorist, or piracy threat exists. Therefore, **military forces must be assigned** either to eliminate the threat so ships can transit unopposed at any time, or to provide direct protection, to include ship augmentation, during transits of threat environments. An environment contaminated by nuclear, biological, or chemical agents may preclude transit by ships. As directed by their geographic combatant commanders, **Navy component commanders are tasked with establishing and implementing plans to provide embarked security teams, and surface and air escort** for the protection of all MSC shipping. While merchant ships are under escort of military forces, tactical control (TACON) is delegated by the MSC area commander to the appropriate Navy component

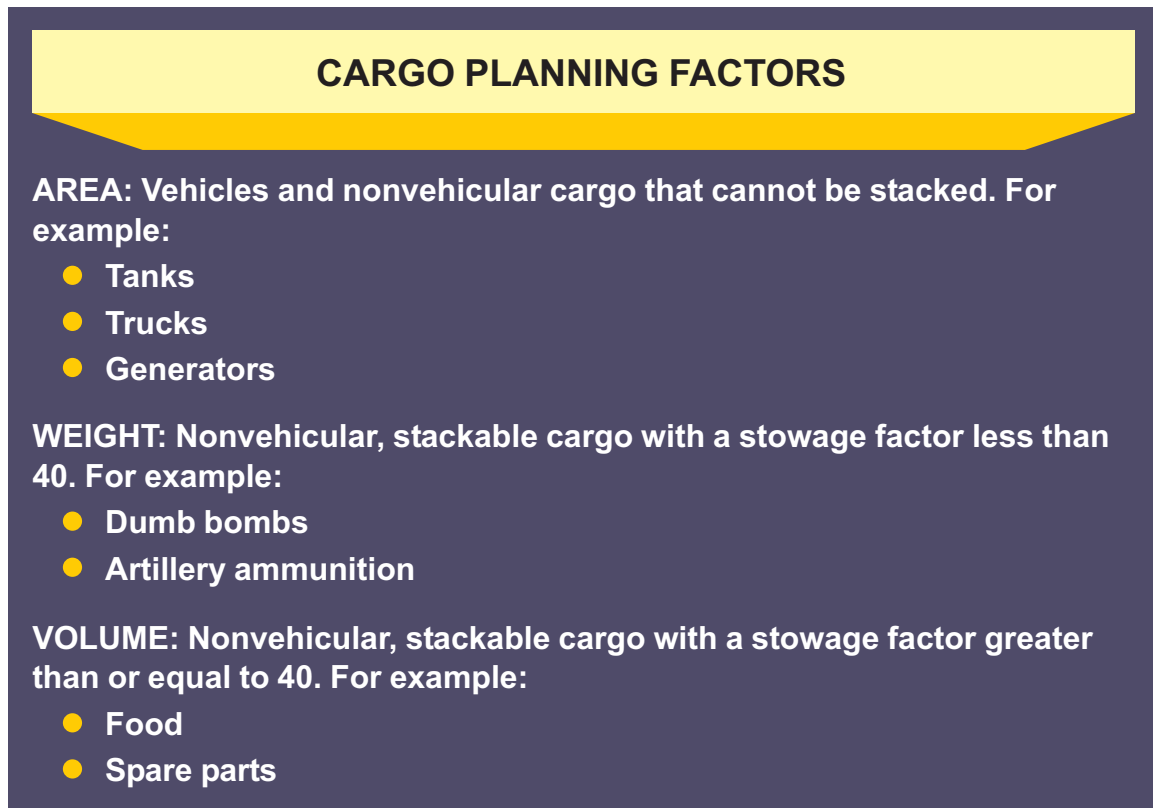


Figure III-3. Cargo Planning Factors

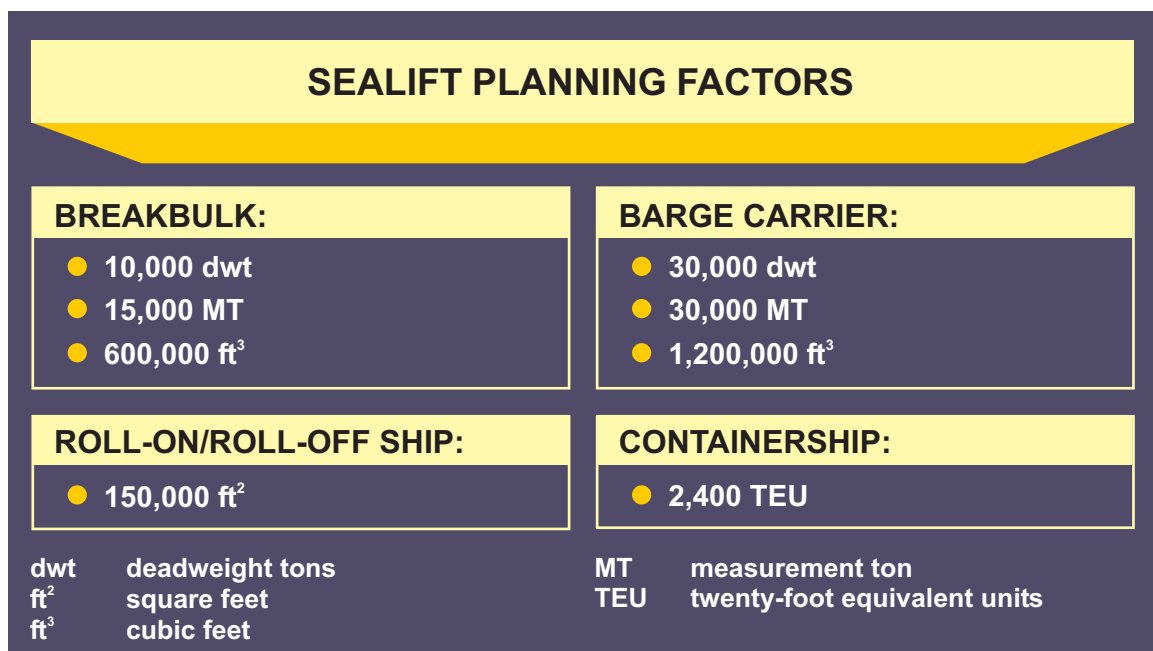


Figure III-4. Sealift Planning Factors

commander, who may then retain or further delegate TACON over the merchant shipping (refer to Chapter VII, “Naval Cooperation and Guidance for Shipping”). However, throughout the escort mission, effective operational control (OPCON) of the shipping remains with MSC. **Protection of shipping may be loosely divided into two distinct areas; en route operations and port security.**

b. **En Route Protection of Shipping.** The traditional, and still very effective, means of directly protecting shipping transit is **escort by naval combatants**. However, protection of shipping does not consist simply of those actions required to assemble and protect groups of merchant ships. Other offensive actions that reduce threats to sealift shipping also may eliminate the need for naval escort and be a more efficient use of resources. These actions may involve other use of **air, land, or naval power**, as appropriate. Internal protection of ships while en route is an MSC responsibility. Consequently, MSC provides threat awareness, ensures that vessels/owners are contractually obligated to accept embarked security teams and crew vetting, and provides small arms training. Whatever the means, the desired end state remains the safe, uninterrupted passage of shipping and the delivery of the cargoes to their destinations.

c. **Port Security.** Threats to shipping in seaports are different from those found en route. While the en route threat is primarily from conventional air, surface, and subsurface units and mines, **the port threat is generally from unconventional or special operations forces, as well as terrorist organizations**. The USCG is responsible for the security of ports in the United States and its port security units are now employed overseas. Naval coastal warfare units are also conducting the port security mission overseas. Port security functions involve the safeguarding of vessels and waterfront facilities (including key assets) within the port from internal and external subversive acts, accidents, thefts, or other incidents. **Principal port security activities include:**

- (1) Monitoring port operations.
- (2) Conducting harbor patrols to detect suspicious activity, and determining if the level of security measures taken by vessel and facility owners and operators are sufficient to meet the threat level.
- (3) Surveying waterfront facilities to ascertain capabilities that would be useful in emergency response.
- (4) Establishing and enforcing security zones to safeguard vessels and port areas.
- (5) Developing measures to be taken to prevent acts of maritime terrorism.
- (6) Developing and maintaining maritime counterterrorism plans and responding to maritime emergencies involving terrorism.

(7) Carrying out the Special Interest Vessel Program to safeguard US ports from external threats of sabotage and espionage.

(8) Preparing for mobilization and national defense, including providing waterside security and limited landside security if required.

(9) The Navy, Federal Bureau of Investigation, SDDC, United States Northern Command (USNORTHCOM), US Army Forces Command, Federal Emergency Management Agency, and other agencies, as well as commands acting with and through port readiness committees, play roles in port security and harbor defense depending on the particular crisis, situation, or geographic location. USNORTHCOM must closely coordinate with DOT, the Department of Homeland Security, and the Transportation Security Agency in an effort to protect DOD assets at commercial ports where DOD's jurisdiction is limited. **Protection of shipping in port also requires close coordination** and cooperation among intelligence agencies and commands.

d. **Considerations for Civilian-Crewed Ships Operated by or for MSC.** MSC ships are civilian-manned and therefore have some legal restrictions. In accordance with their civilian status, civilian mariners may not be protected by status-of-forces agreements and are not governed by military rules of engagement. The small crew size of MSC ships and the legal status of civilian mariners generally precludes the tasking of crewmembers for full-time security duties.

e. **Defense of MSC Ships.** **MSC ships are unarmed with the exception of a modest complement of small arms.** The civilian mariners (whether government or contractor employees) who operate MSC ships (whether government or contractor-owned) are not members of the Armed Forces or Federal law enforcement. Accordingly, **MSC civilian and contract mariners are generally restricted to the use of deadly force to protect human life.** In some cases, this will coincidentally provide protection for the ship and/or cargo. In all cases, force protection activities would be limited to actions "within the lifelines" of the ship. For example, due to their civilian status, civilian mariners cannot be employed to serve as a pier sentry or picket boat operator. Accordingly, operational commanders must be prepared to augment MSC ships when, in their judgment, an armed security force is required. To this end, the combatant commander has an array of enabling capabilities to provide force protection to MSC ships under Operation Vigilant Mariner (OVM). These would include the analysis and dissemination of collected intelligence; C2; HNS; P-3 aircraft patrols; dark-ship transits; Operational Risk Management; and the utilization of more heavily armed embarked security teams at selected chokepoints, transits, and ports. OVM commenced in June 2004 to meet SecDef requirement that the Navy act as the DOD Executive Agent for Force Protection of Military Sealift assets. OVM consists of 12-man (master-at-arms rate) embarked security teams that provide security augmentation to MSC assets to detect, deter and defend against waterborne and land-based terrorist attacks. OVM forces are assigned to and employed by Maritime Force Protection Command under Commander Fleet Forces Command. Peacetime requirements, Phase A, are 17 teams assigned to the European, Middle East, and Far East theaters. Tools to accomplish the mission include small arms, crew served weapons, body armor, night vision devices, and secure radios and telephones.

f. **Operations Security (OPSEC).** Sealift has several significant OPSEC aspects. The first, and possibly most obvious problem, is the presence of a large number of fully loaded merchant ships at anchor in a major port. Such a gathering over several days **is an obvious indication that a convoy or major operation is being planned**, and is almost impossible to keep secure. Somewhat more subtle, but still obvious, is the gathering of large numbers of sealift ships at a forward base, particularly those ships which can be identified with an AFOE. The key point here is that, while a large mass of merchant shipping can be regarded as a target in and of itself, the presence of certain types of merchant ships can indicate a major military operation even when the “military” end of the operation has scrupulously observed OPSEC measures. Although not an exhaustive list of OPSEC measures for sealift, **the following should be considered as guidelines:**

(1) Avoid massing of shipping if possible. If that cannot be avoided, minimize the assembly time involved and limit the numbers of ships in any one location.

(2) Be aware of the inferences that can be drawn from the presence of certain combinations of cargoes and specific ship types.

(3) Use deceptive routing and other techniques where possible, avoiding patterns in vessel operations and routing, and routing shipping away from the “normal” sea lanes to avoid detection by neutral or other shipping.

7. Environmental Considerations

a. Sealift support operations should be planned and conducted with appropriate consideration of their effect on the environment in accordance with applicable US and HN agreements, environmental laws, policies, and regulations. **A separate annex or appendix for ensuring that proper attention is given to environmental considerations should be included in each OPOD and OPLAN.** The annex or appendix should address the transport of oil and hazardous substances, fuel transfers, shipboard waste disposal including hazardous waste, hazardous materials transport, medical and infectious waste disposal, natural and cultural resources protection including marine mammals, oil and hazardous substance spills prevention and controls, and water pollution prevention. In addition to coordination with other staff elements (e.g., medical and legal), coordination with other DOD agencies (e.g., DLA) and other USG departments (e.g., Department of Energy) also may be necessary.

“The Department of Defense’s environmental policies are evolving from the era of reactive, compliance-based programs to proactive programs focused on sustaining our mission and the environment. Maritime sustainability is an important element of these policies. We believe that national security and environmental protection goals can be integrated and compatible.”

Donald R. Schregardus
Deputy Assistant Secretary of the Navy (Environment)

b. Requirements related to environmental considerations may be found in numerous sources, which may include but are not limited to the following.

- (1) Provisions of US environmental law applicable overseas.
- (2) EXORDs.
- (3) DODD, regulations, and policies.
- (4) HN laws.
- (5) Status-of-forces agreements.
- (6) International treaties, protocols, and conventions.

Refer to JP 4-04, Joint Doctrine for Civil Engineering Support, for additional information on environmental considerations.

8. Automated Planning Tools

a. **Transportation Coordinator's Automated Information for Movement System (TC-AIMS II).** TC-AIMS II is an automated information system that will support day-to-day operations for unit movement officers, movement controllers, staffs from battalion/separate company to theater level, mode managers, and installation transportation offices. It will interface with joint and Service systems that provide intransit and total asset visibility to all Services and will be the basic building block of source data. GTN force-tracking software will translate the raw data into ITV and force tracking information.

b. **Joint Flow and Analysis System for Transportation (JFAST).** This is a transportation feasibility evaluation tool resident in a microcomputer. **JFAST is capable of scheduling transportation assets against a TPFDD.** This allows planners to download specific movement requirements from JOPES and identify specific problem areas in meeting latest arrival dates at the PODs. JFAST employs the **Notional Requirements Generator**, which draws from a standardized database, and creates notional movement requirement data for transportation analysis in a no-plan crisis situation.

c. **Integrated Computerized Deployment System (ICODES).** ICODES is an automated information system designed to support cargo management, ship load planning, and stowage at common-user ocean terminals. It also supports the requirements of geographic combatant commanders for oversight and management of ocean terminals. The responsibility for this function is shared within the Army between the SDDC and the US Army Forces Command, and is performed by the US Navy at select locations. The ICODES ship load planning function includes the development and implementation of ship's prestow plans, hazardous cargo reports, and final ship load plans of military cargo and unit equipment. It requires strict accountability of cargo. The information developed through these processes at ocean terminals directly support

ITV of the cargo. This contribution to the DOD objective of total asset visibility from origin to destination includes information required by supported and supporting combatant commanders to accomplish their missions.

9. Transition from Peace to Conflict

a. **General. The transition from peace to conflict represents a critical period for sealift.** Management of the transition during this period will have a significant effect on the success of deployment and sustainment missions assigned to sealift. Lost time is rarely made up, and **it is particularly during the transition period that time is lost.** Lost time can be attributed to misperceptions about the speed with which the DTS in general, and sealift in particular, can transition from a relatively small peacetime force to a major military force. **Transition from a peacetime transportation role to a military deployment role requires significant changes that affect every portion of the sealift forces.**

b. **Sealift Force Structure.** The first and most obvious change in sealift during transition is that **the number of ships under USTRANSCOM and MSC control will rapidly and substantially increase.** It should be noted that the number of ships under MSC OPCON might not be an accurate measure of ships performing the sealift function. Depending on the mode of acquisition, **ships may be delayed for significant time periods before they can be considered as active sealift assets.** For planning purposes, the time periods shown in Figure III-5 will be required to obtain shipping from each source or method of acquisition. The elapsed times represent the period between the first request for that type of shipping and the arrival of ships at berth, ready for loadout. These include the time required to take all of the actions discussed in Chapter V, “Vessel Acquisition and Activation Programs”: activation time (if in reduced operating status [ROS], RRF, or National Defense Reserve Fleet [NDRF]), or the time necessary to make the ship ready for military cargo (if a charter, VISA, and/or VTA or requisition), and transit to the desired SPOE. In the expansion of the sealift force, **several factors may further complicate the rapid accumulation of sufficient shipping,** particularly the acquisition of ships from the RRF and NDRF. These are:

- (1) Frequency of reserve ship test activations and exercises.
- (2) Maintenance effort expended on reserve shipping.
- (3) Shipyard capacity to activate large numbers of ships.
- (4) Availability of trained crews, spare parts, and logistic support.
- (5) Availability of militarily useful shipping on the world charter market.
- (6) Restrictions on the activities of foreign-flag ships by their respective national governments.

SEALIFT ASSET AVAILABILITY TIMES			
ROS SHIPPING:		VISA and/or VTA:	
4-7 Days (depending on location)		7-45 Days (depending on location)	
Charter:		Requisitioning:	
4-30 Days (depending on location)		14-45 Days (depending on location)	
RRF:		NDRF:	
4-20 Days (depending on readiness and/or location)		45-135 Days	
NDRF	National Defense Reserve Fleet	VISA	Voluntary Intermodal Sealift Agreement
ROS	Reduced Operating Status	VTA	Voluntary Tanker Agreement
RRF	Ready Reserve Force		

Figure III-5. Sealift Asset Availability Times

10. Other Considerations

As mentioned in Chapter II, “Organization and Responsibilities,” MSC and SDDC interface in the area of water terminal operations. It also is important to note that USTRANSCOM will select the water terminals in the US, and the geographic combatant commander will select the water terminals in an overseas theater. Selection will be based on various factors of which the maximization of the arrival, marshalling, and movement of deploying forces through a water terminal complex will be prime considerations. Other factors include Service requirements and transportation infrastructure in proximity to the ports.

For additional guidance concerning water terminal operations, refer to JP 4-01.5, Joint Tactics, Techniques, and Procedures for Transportation Terminal Operations.

CHAPTER IV SEALIFT ASSETS

“On fast sealift . . . it has been crucial in [Operation DESERT STORM] and we could have used more of it without question.”

**Defense Secretary Dick Cheney,
Senate Armed Services Committee Hearing, 11 Sep 90**

1. General

a. **Sealift forces** are those militarily useful merchant-type ships available to DOD to execute the sealift requirements of the DTS across the range of military operations. Called **“common-user shipping,”** these ships will be engaged in the transportation of cargoes for one or more Services from one seaport to another or to a location at sea in the operational area pending a decision to move the cargo embarked ashore. The sealift force is composed of shipping from some or all of the following sources:

- (1) Active government-owned or controlled shipping.
- (2) Government-owned reserve or inactive shipping.
- (3) US privately owned and operated commercial shipping.
- (4) US privately owned, foreign flag commercial shipping.
- (5) Foreign owned and operated commercial shipping.

b. The precise nature of each type of shipping and how it is acquired for DOD use is discussed in Chapter V, “Vessel Acquisition and Activation Programs.” This chapter will describe those ships and ship characteristics that are most useful for DOD missions, discuss the advantages and disadvantages of common merchant ship types for military operations, and provide a general overview of DOD sealift ship and sealift support programs.

2. Ship Types

a. Sealift shipping falls into three broad categories: dry cargo ships or freighters, liquid cargo carriers or tankers, and passenger ships. During joint operations, dry cargo ships transport the equipment and supplies required to conduct and sustain the operation; tankers carry the refined POL so critical to an operation’s success; and passenger ships provide troop carrying, noncombatant, or sealift medical evacuation capability.

b. **Dry Cargo Ships.** In general, a dry cargo ship is considered to be usable for military purposes if it has a minimum carrying capability of 2,000 LT of cargo and the ability to carry, without significant modification, unit equipment, ammunition or sustaining supplies. The major types of dry cargo ships are listed in Figure IV-1 and described below.

(1) **Breakbulk.** The term “breakbulk ships” refers to ships characterized by large open hatches and fitted with boom-and-winch gear or deck cranes. They are primarily used at ports, which either because of low cargo volumes or local economic factors, lack the modern facilities and inland rail/highway connections required to support efficient containership operations. In competition with containerships, **breakbulk ships are no longer commercially viable.** Fewer of these ships are being built each year, and none have been built for US flag owners in recent years. The military **advantages** of general cargo or breakbulk ships include flexibility in the load composition afforded by open decks and multiple cargo holds and the ability to discharge cargo without the use of developed port facilities. Their military **disadvantages** include time-consuming cargo operations, the need for dunnage to block and brace pallets, and the requirement for large numbers of trained personnel to load and unload.

TYPES OF DRY CARGO SHIPS

- Breakbulk
- Roll-On/Roll-Off Ships
- Containerships
- Barge Ships
 - Lighter Aboard Ship
 - SEABARGE
 - Ocean-Going Barge
- Float-on/Float-off Ships
- Heavy Lift Ships
- Dry Bulk Carriers

Figure IV-1. Types of Dry Cargo Ships



General cargo and breakbulk ships, while dated in terms of cargo loading and unloading operations, are militarily useful because of great flexibility and the capability to operate effectively through austere ports.

(2) **Roll-On/Roll-Off Ships.** A RO/RO ship is **specifically designed to carry wheeled and tracked vehicles** as all or most of its cargo. Vehicles are driven or towed on and off the ship by means of either the ship's own ramps or shore-based ramps. Because it is designed to accommodate cargoes which cannot be stacked but which vary in height, below-deck space and volume utilization is generally less efficient than on a containership. RO/RO ships are thus commercially viable only in certain specialized trades. However, the RO/RO is the **preferred ship type for deployment of military unit equipment**. The military **advantages** of RO/RO ships include the capability for rapid loading and discharge of military vehicles and non-self-deployable aircraft, and open deck areas well suited to the carriage of outsized military cargo. Their military **disadvantages** include their relative unsuitability for carriage of sustaining supplies and ammunition (in comparison with general cargo and containerships). One type of RO/RO ship is the pure car and truck carrier (PCTC). PCTC ships are designed to transport vehicles (cars and trucks primarily) across the ocean. They are most commonly used by the automobile/vehicle manufacturing industry. The PCTC decks and ramps are designed to facilitate ease of loading and unloading vehicles. Their availability is limited because their market sector is much reduced compared with containerships.

(3) **Containerships.** Containerships are **specifically designed to carry all of their cargo in standard ocean shipping containers**, which are loaded into vertical “cells” below deck and stacked and lashed on deck. Most rely on shore-based cranes or tactical auxiliary crane ships (T-ACSs) for cargo loading and discharge. Standard ocean shipping containers are weatherproof, made of steel or similar material, constructed to withstand the high forces and elements to which they may be subjected in heavy seas, and usually designed and sized to permit their efficient interchange for connecting with intermodal systems for inland rail or highway



Roll-on/Roll-off ships, such as the SS CAPE ISABEL, are the preferred ship type for military deployments.



The MV CARTER is one of Military Sealift Command's pre-positioned containerships.

movement. **Shipping containers are available in a variety of configurations** that include end opening, side opening, half heights, open top, flatrack, refrigerated, liquid bulk (tank), and modular (quadcon/tricon). Except in highly specialized trades, **cargo containers generally conform to US and international standards** that have been developed by the American National Standards Institute and the International Organization for Standardization (ISO) respectively. The size standards for outer dimensions of shipping containers are 20' or 40' length, 8' width, and 8' or 8'6" in height. 40' containers are the standard; however, there are sealift enhancement features (SEFs) such as coupling devices that can make two 20' containers fit into one 40' container slot. 20' containers are particularly useful in transporting high-density cargo such as ammunition. To increase revenues, "high cube" containers with heights of 9'6" have come into common use. Fortunately, most containerships can carry containers of mixed heights without significant difficulty. Depending on cargo density, a standard 20' container can carry up to 15-20 short tons (STs) or 29 MT of cargo. Containerships generally carry a mix of 20' and 40' containers, and some are fitted for deck stowage of 45' and 48' lengths. Containership capacity is normally expressed in twenty-foot equivalent units (TEUs), which is defined as the number of 20' x 8' x 8'6" containers it can carry; or, similarly, in forty-foot equivalent units. **Containerships vary considerably in size.** Some of those serving major ports have capacities exceeding 8,000 TEUs. Some recently built for feeder service (i.e., serving small outports from a major port) have capacities of 400 TEUs or less. There is a high likelihood of their availability due to the large number of containerships in the world. The military **advantages** of containerships include their large cargo capacity, excellent suitability for carriage of sustaining supplies and ammunition, and rapid and efficient cargo operations. Movements by containers also provide a greater degree of cargo security, reduce pilferage and damage to cargo, reduce cargo-handling costs, and result in faster, more efficient deliveries. Their military **disadvantages** include near total dependence

on specialized shoreside equipment for cargo loading and discharge, and general unsuitability for carriage of large vehicles and oversized cargo unless modified to utilize heavy-duty flatracks.

Further information on intermodal containerization use is available in JP 4-01.7, Joint Tactics, Techniques, and Procedures for Use of Intermodal Containers in Joint Operations.

(4) **Barge Ships.** Barge ships are **designed to carry specially designed barges (lighters) or a combination of such barges and containers.** Thus, they are necessarily large ships with a large heavy lift capability. Their design was intended to combine the flexibility and self-sustained cargo handling capability of the general cargo ship with the rapid port turnaround time of the RO/RO and containership.

(a) **Lighter Aboard Ship (LASH).** The LASH is a single-decked vessel with large hatches, wing tank arrangements, and a clear access to the stern. The LASH has a gantry crane with a cargo handling capacity of approximately 450 LT. The function of this crane is to convey barges or lighterage from the stowed location aboard the ship to the stern region, and to lower the barges or lighterage into the water. Some LASH ships are equipped with container gantry cranes for the handling of the onboard complement of containers. Different classes of LASH ships have capacities ranging from 64 to 89 barges or a mixture of LASH barges and military lighterage.

(b) **SEABARGE (SEABEE).** The SEABEE is arranged much differently from the LASH in that it has **three decks on which the cargo barges or container flats are stowed.** Barges are brought to each deck level by a stern elevator and are moved internally within the ship by the Transporter (conveyor) System. Two barges can be loaded or discharged in about 40



The SS Cape Farewell is one of MSC's four Lighter Aboard Ships and one of the 57 Ready Reserve Force ships.

minutes. SEABEE ships can carry up to 38 sea barges (97'6" long x 35' wide x 16'11" high). The elevator capacity is 2,000 LT. The SEABEE ship is the preferred ship to transport landing craft, utility. The military **advantages** of barge carriers include their suitability to carry either unit equipment, sustaining supplies, or ammunition; the ability to carry amphibious lighterage; and the capability to preload the barges before ship arrival and to discharge cargo from the barges at relatively austere port facilities, after the ship has sailed. Their military **disadvantages** include a complete dependence on a single, complicated mechanical system for barge discharge; the barge's dependence, once afloat, upon the availability of towage; and the overall unsuitability of the barges for towing outside harbors or other protected waters.

(c) **Ocean-Going Barges.** Ocean-going barges are specifically designed to carry a variety of cargo types over the open seas. These barges are either towed by a large ocean-going tug with a hawser or towing cable, or have an interlocking connection for a push-tug (articulated/integrated tug/barge). Some have open holds and can carry containers, rolling stock, or bulk cargo such as grains or ores. Other barge types have a solid deck with the internal compartments designated for the carriage of liquid cargoes and petroleum products, or covered holds or deckhouses for cargo protection. In most cases, ocean-going barges do not have the speed and capacity of ships. However, they are very versatile and capable of deploying into shallow draft ports and up rivers and estuaries that the larger ships are unable to navigate.

(5) **Float-On/Float-Off Ships.** These specialized vessels, or semisubmersible ships, provide the capability to load, transport, and offload outsized military cargo independent of port equipment traditionally used for handling large or extremely heavy cargo, such as tug boats, barges, landing craft, floating cranes, and single anchor leg mooring systems. Lifts range from approximately 50 to as much as 45,000 tons. These ships are designed to take on ballast water in floodable tanks that partially submerges the vessel. Cargo is then floated over the submerged portion of the vessel, which then deballasts and surfaces under the cargo. After the vessel is fully afloat, the cargo is secured for transport.

(6) **Heavy Lift Ships.** Heavy lift ships are designed to carry exceptionally heavy loads such as boats, barges, cranes, trucks, passenger ferries, or other heavy cargoes. Cargo can be stowed aboard the ships by a lift-on lift-off (LO/LO) method using shoreside cranes or the ship's own cranes, or float-in, float-out where the ship partially submerges during loading and unloading. These ships are extremely useful for large, heavy, over-sized, and bulky military equipment and cargo.

(7) **Dry Bulk Carriers.** Dry bulk carriers are **designed to carry grain or similar cargoes in bulk** (i.e., material that can be dumped, sucked, pumped, or blown). Loading and discharge are normally performed at specialized terminals, using cargo-handling systems that are designed for specific commodities. Gravity is often used for loading; the various discharge methods include the use of pneumatic systems, conveyors, and excavation-type machinery. Most dry bulk carriers are not considered to be militarily useful. However, some are fitted with deck cranes so that, in some cases, their characteristics are similar to those of a general cargo ship without tween decks.



The MV VIRGINIAN is a heavy lift ship capable of transporting oversized military cargo.

c. **Liquid Cargo Carriers.** Liquid cargo ships, or tankers, are **specifically designed to transport liquid cargoes in bulk**. Although tankers differ greatly in size, their cargo handling equipment is similar. **Specific features of the cargo handling equipment differ**, however, based on the intended cargo. These differences may limit the capability of the ship to carry cargo other than that for which it was designed. Tanker capacities are stated in terms of cargo deadweight tonnage (DWT) or barrels (BBL). DWT is measured in LT of 2,240 pounds and 1 BBL equals 42 US gallons. The parameters that define a militarily useful tanker are the capability of carrying POL, a capacity within the range of 2,000 to 100,000 DWT, and a sustained speed in excess of 12 knots. **Tankers are classed by size and type of cargo**. The major types of liquid cargo carriers are listed in Figure IV-2 and described below. In general, smaller tankers carry “clean” cargoes (refined products, such as gasoline, diesel fuel, or jet fuel). Large tankers generally carry “dirty” (black oil or crude oil) cargoes.

(1) **Handy Size Tankers.** The handy size tanker (6,000 to 35,000 cargo DWT, or approximately 48,000 to 280,000 BBLs) is the **most militarily useful**. These generally carry clean or refined products, although some may carry black oil, chemicals and, occasionally, bulk grain. The term “handy size tanker equivalent,” refers to a tanker of 200,000 BBL or approximately 25,000 DWT. The military **advantages** of handy size tankers include their ability to enter most of the world’s tanker ports, the relatively short time required

TYPES OF LIQUID CARGO CARRIERS

- Handy Size Tankers
- Medium Size Tankers
- Large Crude Carriers

Figure IV-2. Types of Liquid Cargo Carriers



The USNS COBB delivers petroleum products to storage and distribution facilities worldwide.

for tank cleaning when required, and their overall flexibility with regard to the numbers of different cargoes they can carry.

(2) **Medium Size Tankers.** The medium size tanker ranges in capacity from 35,000 to 100,000 DWT (or approximately 280,000 to 800,000 BBLs). As a general rule, those under 60,000 DWT can carry “clean” cargoes while those over 80,000 DWT will, almost exclusively, carry crude oil or other “dirty” cargoes. Their military **disadvantage** is that it is extremely difficult and time-consuming (months) to clean the tanks and piping of tankers that have been transporting either crude oil or other “dirty” cargoes, so they can be used to transport refined POL products.

(3) **Large Crude Carriers.** Large crude carriers are the largest tanker class and are **solely dedicated to the transportation of crude oil**. Very large crude carriers range in capacity from 100,000 to 400,000 DWT, while ultra large crude carriers have even greater capacities. None of these ships are considered militarily useful.

(4) **Offshore Petroleum Discharge System (OPDS)**

(a) OPDS provides a semipermanent, all-weather facility for bulk transfer of refined bulk petroleum (e.g., JP5 and JP8) directly from an offshore tanker to a beach termination unit (BTU) located immediately inland from the high watermark. POL then is either transported inland or stored in the beach support area. Major OPDS components are: the OPDS tanker with booster pumps and spread mooring winches, a recoverable single-anchor leg mooring (SALM) to accommodate four tankers up to 70,000 DWT, ship to SALM hose lines, up to four miles of six-inch (internal diameter conduit for pumping to the beach, and two BTUs to interface with



The SS Potomac is an offshore petroleum discharge system, or OPDS, tanker. Potomac can support any logistics over-the-shore operation with 173,000 barrels of JP-5 fuel delivered through its integral OPDS system.

the shoreside systems. OPDS can support a two-line system for multiproduct discharge, but ship standoff distance is reduced from four to two miles. Amphibious construction battalions install the OPDS with underwater construction team assistance. OPDSs are embarked on selected RRF tankers modified to support the system. There are three OPDS tankers, of which two are normally forward deployed.

(b) MSC recently contracted for the construction of a replacement system for the current OPDS tankers. The new system, being constructed in a US shipyard, will apply state of the art commercial off the shelf technology and will be deployed by 36 civilian personnel vice the 200 military/civilian personnel currently required. The new system will not incorporate afloat storage of fuel, but will utilize tankers of opportunity. This new system will be capable of providing 1.7 million gallons per day of JP5 or JP8 (50% more fuel than the current system) from up to eight miles offshore in all bottom conditions in significantly higher sea states than the current system. The system consists of an OPDS support vessel, an embarked tender vessel, and other water craft including a lighter, amphibious; resupply, cargo which will deploy the OPDS conduit and BTU. Once the conduit is deployed, the support vessel will use dynamic positioning to hold the tanker supplying the fuel in place.

For additional guidance on OPDS, refer to JP 4-01.6, Joint Tactics, Techniques, and Procedures for Joint Logistics Over-the-Shore (JLOTS).

d. **Troop/Passenger Ships.** Although government-owned national defense reserve troop ships are specifically designed to transport troops for combat missions, the mission has changed significantly. Troops are generally airlifted to safe landing areas near the combat zone. **Troop ships are used for movement of military troops** to and from combat and safe areas where troops embark or debark military and commercial aircraft; **passenger ships also serve for rest and recreation for troops** during long periods of combat; these ships are generally foreign flag privately owned passenger vessels equipped with amenities not available in traditional troop ships. **National defense reserve troop ships are generally converted state maritime academy training vessels** that have been enhanced to enable the transport of troops for combat missions. These ships have limited cargo space, and they carry between 480 to 800 troops. When the



The SS Empire is one of the troop/passenger ships currently in the National Defense Reserve Fleet.

number of troops increases, the use of folding canvas cots, and berthing on deck and in designated holds is required. Commercial privately owned US and foreign flag passenger ships are traditional cruise or converted ferry vessels equipped with the necessary comforts; vessel capacity varying with the capability for messing and berthing.

3. Sealift Ship Programs

a. **The conventional sealift assets discussed above cannot meet all strategic sealift and sealift-related requirements alone.** These requirements include the rapid deployment of heavy Army combat units and Marine Corps forces, containership discharge where port facilities are damaged or nonexistent, expeditionary aviation maintenance support, state-of-the-art medical care for expeditionary forces, and PREPO of combat and support equipment and supplies. **To meet these requirements, various sealift ship programs have been established** as shown in Figure IV-3 and described below.

b. **Fast Sealift Ship.** The FSSs are former containerships, purchased by the Navy and converted to a RO/RO configuration with on-board cranes and self-contained ramps that enable the ships to off-load onto lighterage while anchored at sea or in ports where shore facilities for unloading equipment are unavailable. The vessels are specially suited to transport heavy or bulky unit equipment such as tanks, large wheeled vehicles and helicopters. The present eight ships have a joint, one-time lift capability of approximately 1.3 million square feet and also have a container capability. The FSSs are the fastest cargo ships in the world. They are capable of a sustained speed in excess of 27 knots. The FSSs are berthed at CONUS East and Gulf Coast

SEALIFT SHIP PROGRAMS

- Fast Sealift Ship
- Large Medium Speed Roll-On/Roll-Off Ships
- Tactical Auxiliary Crane Ships
- Aviation Logistics Support Ships
- Hospital Ships
- Afloat Pre-positioning (PREPO) Force
 - Maritime PREPO Ships
 - Afloat PREPO Stocks
 - Navy, Defense Logistics Agency, Air Force Ships

Figure IV-3. Sealift Ship Programs

ports in a 4-day ROS, each maintained by a crew of 15. When the FSSs are at full operational status they operate with a crew of 42.

c. **Large Medium Speed Roll-On/Roll-Off Ships.** A LMSR is similar to any other RO/RO ship in that it is specifically designed to carry wheeled and tracked vehicles as all or most of its cargo (see Roll-On/Roll-Off Ships). **A LMSR differs from most other RO/RO ships in**



Large Medium Speed Roll-On/Roll-Off ships, such as the Soderman, are the preferred ship type for military deployments.



The fleet of eight fast sealift ships (T-AKR Algol shown) is capable of lifting 4 Brigade Combat Teams.

that it is faster, larger, and has cranes and hatches to support LO/LO operations. By design, an LMSR is capable of sustaining a transit speed of at least 24 knots. LMSRs are PANAMAX ships (the largest ships that can transit the Panama Canal) (950' length, 105' beam, 34-35' draft), with two to three times the stowage capacity of the average RO/RO. The gross cargo space for the LMSRs range between approximately 300,000 square feet for the four conversion ships and approximately 380,000 square feet for the 15 new construction ships. Usable cargo-carrying capacity is between 225,000 square feet and 285,000 square feet respectively with 25 percent broken stowage applied. The LMSR ship type was built or converted specifically for military use. There are currently no commercial equivalents.

d. Tactical Auxiliary Crane Ships. T-ACSs are converted containerships on which two or three twin-boom revolving heavy-lift cranes have been mounted. These cranes are able to offload containerships and provide a heavy lift capability in locations where port facilities are nonexistent, inadequate, or damaged. T-ACS are capable of handling lifts up to 110 LT, containers of all sizes, and wheeled and tracked vehicles. In addition to this unique offload capability, each T-ACS is able to carry between 200 and 700 containers, and/or flatracks (depending on configuration), and its main deck is also outfitted to carry amphibious lighterage. The T-ACS are part of the RRF, which is maintained by MARAD, and are berthed on all three CONUS seacoasts.

e. Aviation Logistics Support Ships (T-AVBs). There are **two T-AVBs that provide dedicated sealift** for critical movement of the Marine Corps aviation sustainment forces of the MAGTF aviation combat element (ACE). **The T-AVBs are operationally controlled by MSC**

and maintained in ROS-5 status. There is one T-AVB berthed on both the East and West coasts of CONUS. Aviation sustainment personnel deploy and work in standard 8'x8'x20' ISO containers called mobile facilities (MFs). The MFs provide the necessary work space for personnel, support equipment, technical publications, and special tools. **The T-AVB can be deployed in three modes of operation: support, transport, and combination.** In the support mode, approximately 340 MFs and 325 USMC personnel can be embarked to provide seabased support for the MAGTF ACE while loaded aboard ships. In the transport mode, approximately 680 MFs and minimum USMC personnel can be embarked to provide maximum landbased support for the MAGTF ACE when offloaded ashore. In the combination mode, a tailored mix of MFs and USMC personnel can be loaded aboard the T-AVB for a mix of seabased and landbased support for the MAGTF ACE.



The Keystone State is the oldest of the RRF Auxiliary Craneships (T-ACS).

f. **Hospital Ships (T-AHs).** T-AHs are converted tankers equipped with 12 operating rooms and 1,000 patient beds. The two T-AHs in the Navy inventory are berthed on the East and West Coasts and maintained in a 5-day ROS by an average crew of 13 civilian and 43 military personnel. **The ships are operated by MSC.** The US Navy Chief of the Bureau of Medicine and Surgery provides manning for the hospital facilities.

g. **Afloat Pre-Positioning Force.** Afloat PREPO combines **PREPO and sealift.** This program, which involves the forward deploying of equipment and supplies aboard ships, **improves sealift response time in a crisis.** These ships are chartered commercial and government-owned vessels. Some of these ships have useful features that the owners provided to enhance their value to the military. The APF consists of the maritime PREPO ships (MPS), the afloat PREPO stocks (APS)-3 ships, and the Navy, Defense Logistics Agency, Air Force (NDAF) ships.

(1) **Maritime Pre-Positioning Ships.** Maritime PREPO is a **strategic deployment option** that quickly combines the substantial PREPO equipment and supplies loaded aboard the ships of an MPS squadron with a MAGTF to establish a formidable combined arms force capable of sustained operations. The MAGTF and Navy support element (NSE) personnel, selected equipment, and combat aircraft are flown into the objective area where the MPS operations occur. **The 16 MPS are specifically constructed or modified RO/RO ships** that are forward-deployed in three self-contained squadrons. Each squadron (except for the maritime PREPO force enhanced ships which have no bulk liquid capabilities) carries the unit equipment and 30 days of supplies for one brigade-size MAGTF. Each ship carries a spread load of unit equipment, supplies, POL, and potable water. Additionally, **each ship is outfitted with NSE equipment**



The SS Wright (T-AVB) is part of the RRF, but is dedicated to duties for the USMC.



Hospital ships enable medical facilities to be positioned in or near the joint force operational area.

consisting of the camp support and lighterage needed to discharge cargo over unimproved ports or over the beach. MPS Squadron 1 (five ships) is positioned in the Mediterranean; MPS Squadron 2 (five ships) is positioned in the Indian Ocean (Diego Garcia); and MPS Squadron 3 (six ships)

is positioned in the Western Pacific (Guam and Saipan). MPS cargo may be discharged pierside or “in stream” by NSE personnel composed of naval beach group and cargo handling battalion personnel, as well as Marine Corps personnel airlifted to the objective area.

(2) **Afloat Pre-Positioning Stocks - 3 Ships.** The APS-3 consists of 10 government-owned and commercially chartered ships on which pre-positioned military equipment and munitions and/or supplies are stored to meet rapid deployment requirements of the US Army. These ships are forward-deployed with heavy combat equipment, combat support equipment, and sustainment to support a US Army heavy brigade for 15 days, plus sustainment for a unit arriving during the first 30 days of an operation. All ships are capable of self-discharge in the objective area. The APS-3 currently includes two container ships and eight LMSRs. Currently, the ships are under the administrative control of the MPS Squadron Commanders.

(3) **Navy, DLA, Air Force Ships.** The NDAF currently operates seven vessels around the world for the USN, the DLA, and the USAF.

(a) **The USN has one modular cargo delivery system (MCDS) vessel** at Diego Garcia. This vessel **carries Navy ordnance** and also has the capability to operate as a replenishment ship for naval battle groups.

(b) **MSC has operational control of two pre-positioned vessels for DLA.** The two tankers have the OPDS onboard and can deliver fuel from four miles off shore. These ships report to one of the three MPS squadrons depending upon their geographic location.



MPS forward-deploy MAGTF equipment and supplies.



The MV Maj. Bernard F. Fisher is a container ship belonging to MSC's Pre-positioning Program. It is owned and operated by Sealift, Inc. and under charter to MSC.

(c) **The Air Force pre-positioned fleet** consists of two ammunition carriers under MPS Squadron Two's OPCON in the Indian Ocean, one vessel operates under MPS Squadron One's OPCON in the Mediterranean, and one under MPS Squadron Three's OPCON in the Pacific Ocean.

4. Sealift Enhancement Features

a. SEFs consist of **special equipment and modifications that adapt merchant-type dry cargo ships and tankers to specific military missions**. They are typically installed on ships of the RRF or on ships under MSC control. The SEFs fall into three categories: productivity, operational, and survivability enhancements.

b. **Productivity Enhancements.** A number of productivity enhancements **expand the capabilities of merchant ships to carry military cargoes**. Examples include heavy duty flatracks, LASH lift beams, alongside refueling systems, the installation of 20' container hardpoints in 40' container cells, and installation of vehicle tie-downs (D-rings and cloverleaves) on deck. Other productivity enhancements provide the necessary interfaces with ship-to-shore cargo handling systems. Examples include main deck fittings and rails for the transport of amphibious lighterage and alongside lighter mooring systems.

(1) **Flatracks.** Heavy duty flatracks also provide a **capability to carry oversized cargo and maximize containerships' capability to transport military cargo**. Flatracks are portable open-top, open sided containers that provide the capability to stow aircraft, vehicles, and outsized breakbulk cargo that cannot be placed into containers. There are two basic types of

flatracks, based on strength — regular and heavy duty. Regular flatracks are available in 20' and 40' lengths. Virtually all heavy-duty flatracks are DOD-owned and are 40' long. (Note: DOD owns specifically designed 35' flatracks that are used exclusively for FSS.) **Flatracks may be used individually or combined horizontally** with an integral folding flap to form a flush, temporary deck when the flatracks are placed side by side. This temporary deck arrangement enables more than one flatrack at a time to be stowed upon, provides the capability to drive from one flatrack to the next, or allows a single item of cargo to occupy several adjacent flatracks. For example, three adjacent flatracks can accommodate two M-1 tanks. When tiered, at least one flatrack must be removed from an upper level to provide access to cargo on the next lower level. Currently, heavy duty flatracks are pre-positioned at Earle, NJ; Charleston, SC; and Port Hueneme, CA.

Additional guidance on flatracks can be found in JP 4-01.7, Joint Tactics, Techniques, and Procedures for Use of Intermodal Containers in Joint Operations.

(2) **LASH Lift Beam.** The LASH Lift Beam, also known as the Cantilever Lift Frame, is a **special lifting device** that attaches to a LASH's gantry crane. It enables the crane to lift loads with dimensions up to about 90' x 60' and weights up to 200 STs without ship modification. When equipped with this lift beam, LASH vessels are ideally suited to handle amphibious lighterage, and can carry up to 30 90' lighterage sections.

c. **Operational Enhancements.** Operational enhancements are equipment and systems that enable merchant ships to operate with, and provide logistic support to, Navy warships and support units. These features include **communications equipment** operated by embarked military personnel, which provides the capability for classified message traffic, and **Merchant Ship Naval Augmentation Program enhancements** for underway replenishment (UNREP). The UNREP systems are discussed more fully in Appendix A, "Merchant Ship Naval Augmentation Program."

d. **Survivability Enhancements.** Survivability enhancements include internal communications and nuclear, biological, and chemical washdown systems.

5. Logistics Over-the-Shore

Strategic sealift also includes the requirement to achieve an **over-the-shore cargo discharge capability** that matches cargo deliveries in an amphibious objective area or other expeditionary operating area. This is known as logistics over-the-shore (LOTS). While logistic support of major joint forces requires the use of established port facilities, **LOTS operations** are intended to provide minimum sustainment to expeditionary forces for not more than 60 days. LOTS operations are conducted over unimproved shorelines or in ports that are inaccessible to deep draft shipping or that are damaged or otherwise inadequate. Both the Army and the Navy maintain an organic capability to perform LOTS missions in support of their respective Service missions and when directed, to support the combatant commander's requirement for a capability

to perform joint logistics over-the-shore operations. LOTS systems and doctrine are discussed in JP 4-01.6, *Joint Tactics, Techniques, and Procedures for Joint Logistics Over-the-Shore (JLOTS)*.



Logistics over-the-shore operations always resupply without established port facilities.

CHAPTER V

VESSEL ACQUISITION AND ACTIVATION PROGRAMS

“We have at this moment to distinguish carefully between running an industry or a profession, and winning the war.”

Winston Churchill
Memorandum for First Sea Lord, 1939

1. General

The vast majority of vessels required to support military operations are not under DOD control during peacetime. To acquire these ships, **some type of lease agreements or operating agreements must be executed between DOD and the owning and controlling organizations** (either commercial firms or US and allied government agencies). In maritime terminology, **leasing agreements are known as charters**. Although their terms and conditions differ widely, charters are of **three basic types: bareboat, voyage, and time**. A **bareboat charter** is a contract whereby the charterer gets the rights and obligations of “ownership.” The fixed duration of this type of charter is generally for a number of years. The charterer pays in advance for the entire ship on a monthly or semiannual basis even if the vessel is laid up or carries less than its full capacity. Under a bareboat charter, the charterer assumes total responsibility for operating the ship, including manning, provisioning, maintenance, navigation, and logistic support. Under a **voyage charter**, the charterer specifies type of vessel required, cargo to be loaded, and where the vessel is to load and discharge. The charterer pays for either part or all of the carrying capacity of the vessel, usually in one payment. The shipowner provides vessel, crew, fuel, stores, and commits the vessel to being capable of making a given speed. A **time charter** is a contract for the service of the vessel (i.e., its cargo carrying ability), for an agreed period of time. As with a bareboat charter, the charterer pays for the entire carrying capacity of the vessel on a per-day rate, even if the vessel is laid up or carries less than its full capacity. Additionally, the charterer determines where the ship goes and what it carries while paying for port charges and the vessel’s fuel. **Time and voyage charters** are most commonly used to acquire sealift shipping to meet short-term military requirements. A significant amount of military cargo moves in the **US flag liner ships through liner agreements**. SDDC moves the majority of peacetime military cargo using commercial liner service. Military cargo is offered to carriers in less than full shipload lots for a dollar per ton rate, and moves along established trade routes. This includes overseas movement of household goods and vehicles of USG employees. The sealift acquisition and activation decision flow is detailed in Figure V-1.

2. Government-Owned/Controlled Assets

a. Government-owned shipping (primarily RO/RO) is the most readily available source for quickly deploying large quantities of unit equipment. However, **the number of ships in this category is limited**, and they would primarily support the very early stages of a major military deployment.

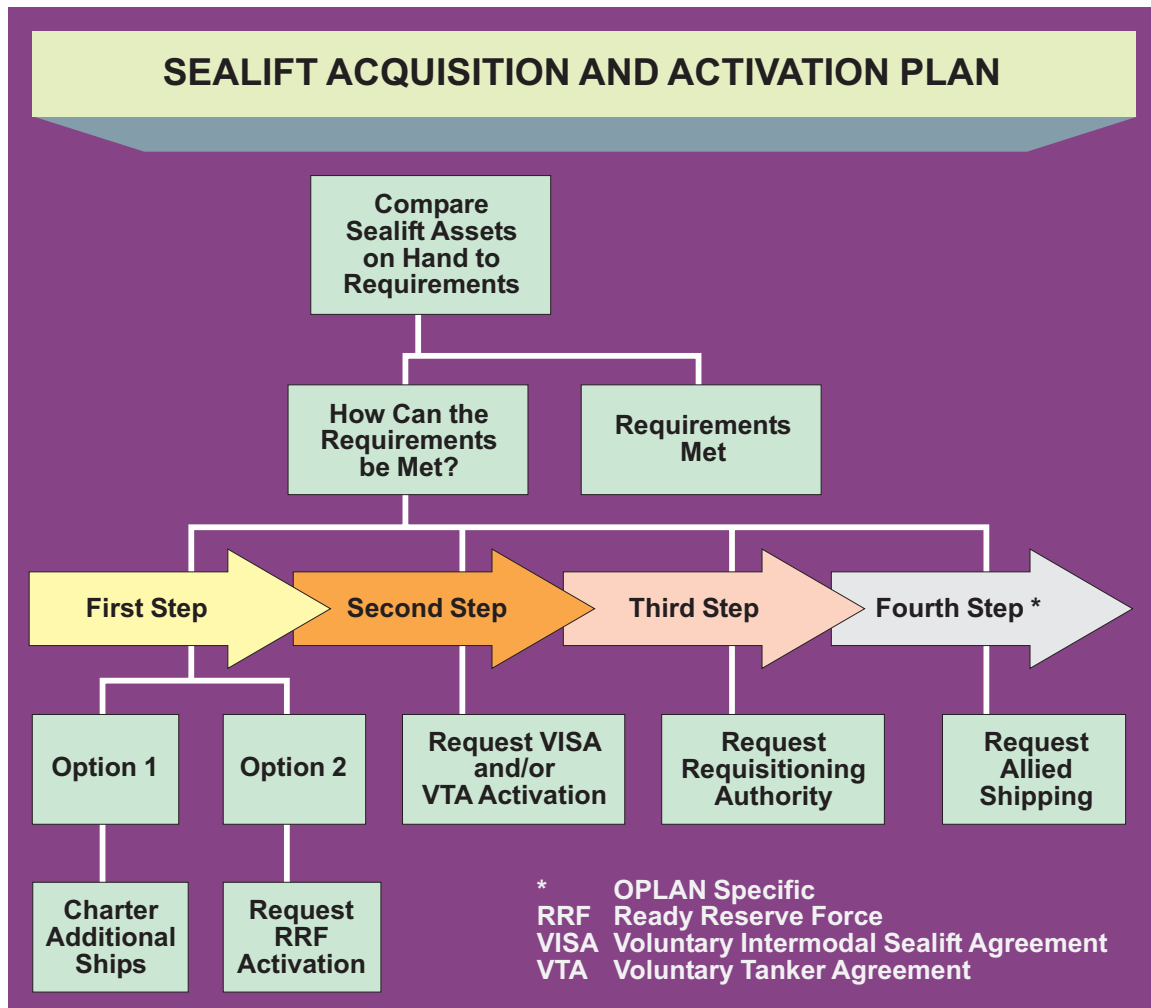


Figure V-1. Sealift Acquisition and Activation Plan

b. **Active Assets.** The active government-owned and controlled sealift forces are MSC common-user point-to-point shipping and the APF. **Common-user ships** are owned by or under long-term time charter to MSC and are employed in providing sealift to all DOD agencies on a nondedicated basis. In a crisis, these ships may be immediately diverted to a SPOE to load deploying military cargo. However, **MSC common-user shipping** involved in peacetime sealift missions may be distant from CONUS SPOEs and thus may not be immediately available. The ships of the APF will execute their missions at the time and place required by the JFC under whose command the specific ships have been placed.

c. **Inactive Assets.** Inactive or reserve sealift assets consist of **Navy-owned ships** maintained by the Navy in ROS and **ships maintained by MARAD** for use in a contingency. The latter are known as the **RRF** and its larger set, the **NDRF**. With very few exceptions, title to RRF and other NDRF ships are vested in MARAD's parent organization, the DOT. The exceptions are vessels owned by the Services that have been placed in MARAD custody at NDRF sites, but which the owning Service can unilaterally activate whenever required. The RRF is a quick-

response subset of the NDRF but, because RRF activation procedures differ from those for the NDRF, they will be considered separately.

(1) **Reduced Operating Status.** Because ROS ships are maintained by cadre crews in CONUS ports, they are the **first sealift shipping available in a crisis** and are expected to be ready to execute their mission within 96-120 hours of the activation order. These ships' readiness, while measured in terms of hours, is expressed in terms of days. For example, a ROS-4 ship is expected to be under way within 96 hours. **The Department of Defense is not required to coordinate with any other agency to order activation of DOD ROS ships.** The Navy-owned and maintained ROS ships include the FSSs, LMSRs and T-AHs.

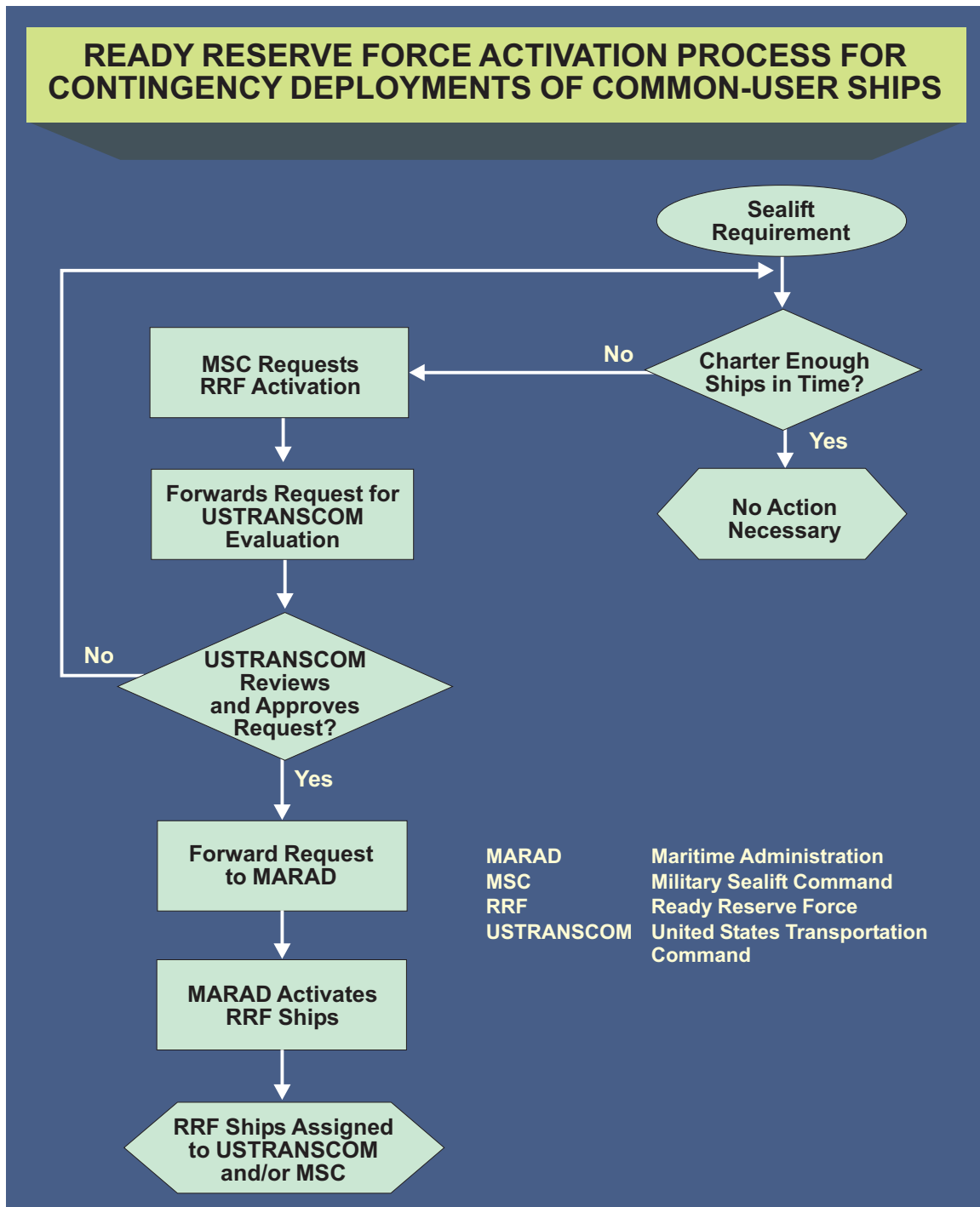
(2) **Ready Reserve Force.** The RRF is the **most significant source of government-owned early deployment shipping** in terms of both the number of ships and overall cargo-carrying capability. RRF ships are maintained by MARAD in various specified states of readiness. Most are berthed on the three CONUS seacoasts; there are three OPDS tankers, of which two are activated as part of the APF, with the other one in an inactive status in CONUS. There are three small shallow draft T1 tankers in the RRF that are maintained in RRF-10 in Tsuneishi, Japan. These ships are activated pursuant to presidential action or as otherwise authorized under law. The specific procedures are discussed below.

(a) **Status.** Starting in FY 2006, the RRF will consist of 58 ships, including 52 dry cargo ships (breakbulk, RO/ROs, LASH, SEABEEs, crane ships) and 6 tankers.

(b) **Ship Maintenance and Upgrade.** RRF ships are maintained and upgraded by MARAD using funds appropriated from DOD for that purpose.

(c) **Activation Process.** CDRUSTRANSCOM requests the activation of RRF ships by MARAD for contingency deployments. Upon activation, the ships are committed to CDRUSTRANSCOM and are under the mission control of COMSC. The SECNAV will request Service-organic or theater-assigned ships. **The ships are manned, provisioned, operated, and maintained by commercial shipping companies** under agreements with MARAD. The activation process is shown in Figure V-2. These vessels can be activated in 4 to 30 days. Those vessels in the highest state of readiness, ROS-4 or ROS-5, are maintained by a civilian crew of 9 to 10 mariners. When activated to support our armed forces, operating authority is transferred to the Surge Office Project of MSC. In order to ensure readiness, MARAD regularly exercises activation trials to test the vessels under operating conditions. The RRF is funded from the Navy-controlled National Defense Sealift Fund. On the average, it costs between \$3 million and \$4 million per ship per year to maintain the RRF ships in 4 to 20 day readiness status. However, ships in a RRF 20 readiness status average less than \$1 million per ship per year.

(3) **National Defense Reserve Fleet.** The NDRF (excluding its quick-response subset, the RRF) contains **older dry cargo ships, tankers, troop transports, and other types of vessels** (tugs and other such types) that are maintained in MARAD custody under **minimal preservation**. Current planning considers NDRF vessels strategic sealift resources suitable for use as replacements for combat losses, for sustainment, and for economic support. Because of their



**Figure V-2. Ready Reserve Force Activation Process for
Contingency Deployments of Common-User Ships**

relatively low level of readiness, NDRF ships would require a minimum of 30 to 120 days to activate. They are berthed at MARAD Reserve Fleet sites in the James River (Ft. Eustis), VA; Beaumont, TX; and Alameda, CA.

(a) As of 31 March 2005, the NDRF consisted of 262 ships (59 in the RRF). Of the non-RRF ships, 18% are ready for scrapping and 56% are being prepared for scrapping. The NDRF is expected to decline further as the disposal of older ships continues.

(b) **Activation Process.** NDRF ships are made available to DOD whenever the President proclaims that the security of the nation makes it advisable or during any national emergency declared by proclamation of the President. A flow diagram of the activation process is shown in Figure V-3.

3. Commercial Assets

a. **Commercial ships will be required to fill sealift requirements in virtually every major crisis situation.** DOD can obtain commercial shipping from the following sources: US flag commercial charters and liner service; foreign owned charters and liner service ships, used in accordance with existing laws and policies; ships/capacity committed to VISA/VTA; US-owned ships, registered under certain flags, known as the effective US control (EUSC) fleet; and militarily useful US flag ships which are subject to requisitioning. Registry procedures between certain nations allow EUSC ships under the registries to be available to the USG in a national emergency. Additionally, shipping may be obtained through allied agreements.

b. **US Flag Ships.** The US flag fleet is generally considered to be the commercial shipping sector most responsive to DOD requirements. However, the number of militarily useful US flag ships is steadily declining, with no foreseeable reversal.

(1) **Status.** Active, privately owned, oceangoing US flag ships numbered 236 as of 1 October 2004, of which 221 were militarily useful.

(2) **DOD Acquisition Procedures.** DOD can acquire US flag shipping by five methods: commercial or open market charters, liner agreements for scheduled containerized service, VTA, VISA, and requisitioning.

(a) **Commercial Charter.** MSC frequently charters US and foreign flag ships during peacetime to provide additional sealift capacity. **Chartering is a routine commercial transaction** that can be accomplished in as little as two days. However, all chartered ships may not be immediately available in time of crisis. Depending on ship location, the time required to arrive at the designated loading port may be as much as 30 days.

(b) **The Voluntary Intermodal Sealift Agreement.** VISA is the primary sealift mobilization program. It is an intermodal capacity-oriented program vice a ship-by-ship oriented program. All major US flag carriers are enrolled in VISA. This constitutes more than 90 percent of the US flag dry cargo fleet. The worldwide intermodal system provided by these carriers provides extensive and flexible capabilities to DOD. The types of ships enrolled in the VISA program includes containerships, RO/RO ships, LASH vessels, combination RO/RO and containerships, heavy lift ships, breakbulk ships, and tugs and barges. VISA is activated upon approval of the Secretary of Defense. Stage I will be activated by CDRUSTRANSCOM, with

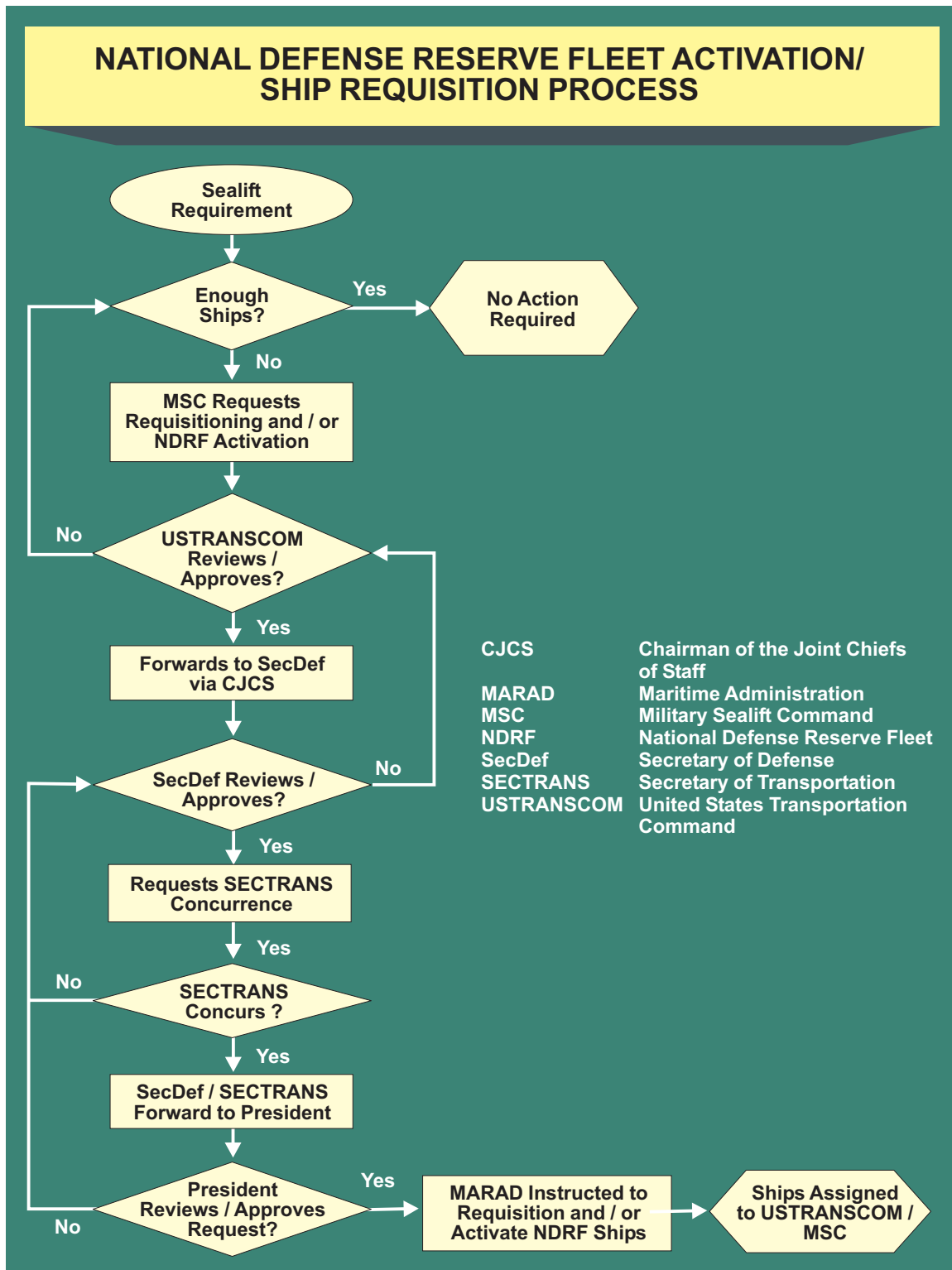


Figure V-3. National Defense Reserve Fleet Activation/Ship Requisition Process

the approval of the Secretary of Defense when voluntary capacity commitments are insufficient to meet DOD requirements. Stage II will be activated when contingency requirements exceed Stage I. Stage III requires the Secretary of Transportation (SECTRANS) to allocate capacity

based on DOD requirements. A Joint Planning Advisory Group (JPAG) is central to the successful implementation of VISA and is comprised of representatives from USTRANSCOM, SDDC, MSC, DLA, MARAD, and intermodal industrial transportation representatives. The JPAG provides USTRANSCOM and its components with recommendations as to how best to resolve critical transportation issues during periods of heavy demand or crisis. The decision flow for activation of VISA is shown in Figure V-4.

(c) **Liner Agreements.** A significant amount of military cargo moves in US flag liner ships. **Liner operators are common carriers operating ships on scheduled sailings over established trade routes.** They provide service to all on a first-come, first-served basis. Military cargo offered by SDDC to liner carriers usually is offered in less-than-full shipload lots. This method helps share space with cargo shipped by private sector business. Since the advent of intermodal transportation, the most common practice is for shipments from a variety of DOD sources to be consolidated in containers under military auspices for delivery to commercial terminals. There, the containers are loaded onto container ships and carried under terms and conditions set forth in an SDDC container agreement or contract. **SDDC agreements or contracts contain uniform terms and conditions** for transporting military cargo between the United States and foreign countries. Agreements or contracts are competitively solicited. Rates are proposed in response to requests for proposals and are finalized by negotiation between SDDC and the interested carriers.

(d) **Voluntary Tanker Agreement.** The VTA, established by MARAD, provides for tanker owners to voluntarily make their vessels available to satisfy DOD needs.

1. The VTA will be activated, at the request of the Secretary of Defense, if the MARAD finds:

a. That a tanker capacity emergency affects the national defense.

b. That defense requirements cannot be met by chartering.

c. That defense requirements can be met more efficiently by activating the VTA than by requisitioning ships.

2. Tanker capacity provided under the VTA is for point-to-point transport of military POL. The agreement is designed to meet contingency or war requirements, not to deal with shortages of capacity in connection with peacetime resupply operations. The decision flow for activating the VTA is the same as that shown in Figure V-4.

(e) **Requisitioning Shipping.** **SECTRANS is authorized to requisition any vessel which is majority owned by US citizens,** whether registered under the US or foreign flag, whenever the President proclaims that the security of the nation makes it advisable, or during any national emergency declared by proclamation of the President (and/or concurrent resolution of the Congress). The requisitioning process is essentially the same as that for activating the NDRF, shown in Figure V-3.

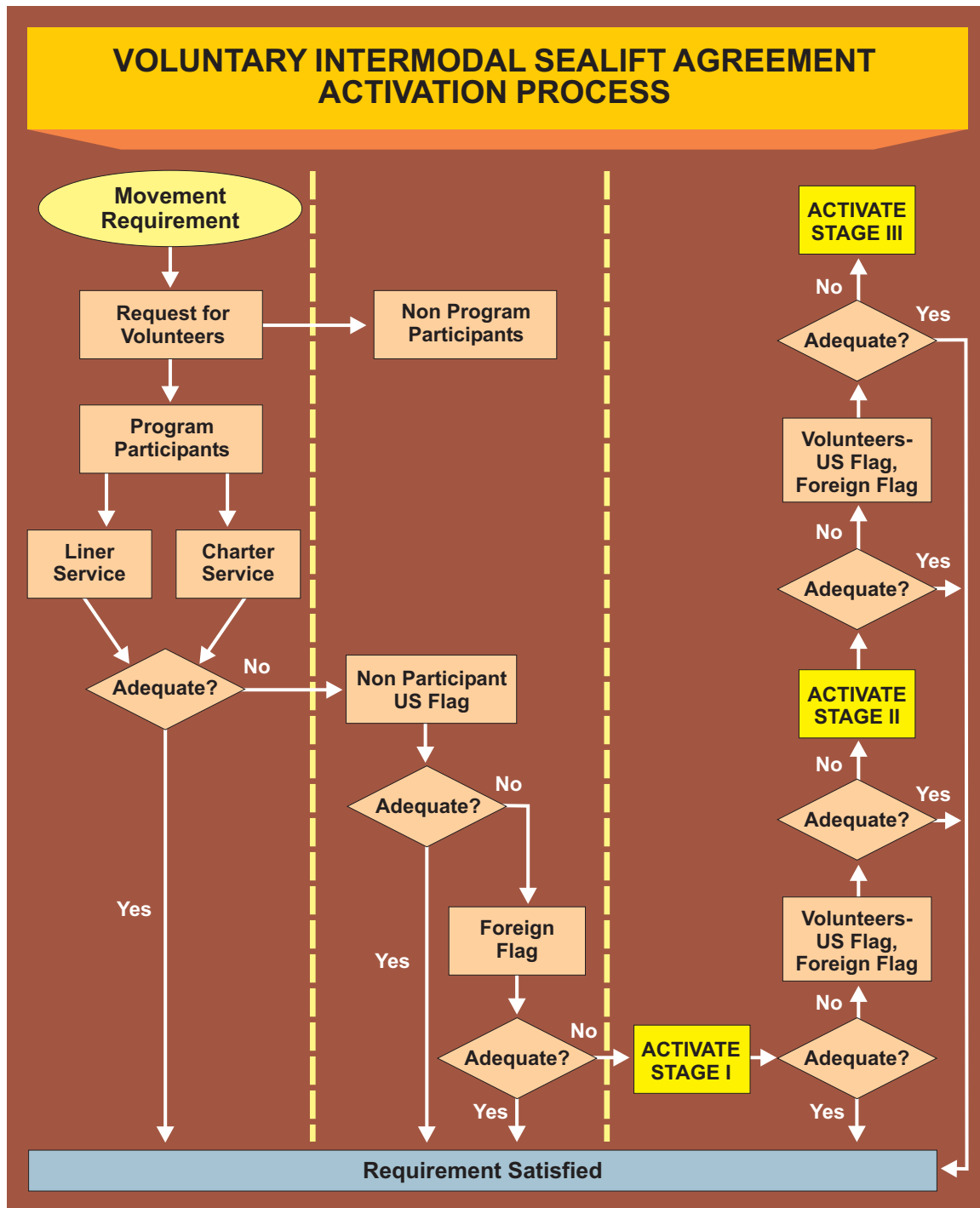


Figure V-4. Voluntary Intermodal Sealift Agreement Activation Process

c. **Effective US-Controlled Shipping.** EUSC ships are majority owned by US citizens or corporations, but are registered and operated under the flags of the Marshall Islands, Liberia, Panama, Honduras, the Bahamas, or other governments that will **permit their ships to be made available** (by chartering or, if necessary, by requisitioning) to the **USG in time of emergency**. If requisitioned, these vessels would be bareboat chartered and require crewing.

(1) **Status.** The EUSC fleet numbers over 60 ships; but these are primarily tankers and dry bulk carriers and are almost entirely crewed by foreign nationals.

(2) **DOD Acquisition Procedures.** EUSC ships may either be **chartered commercially** or **requisitioned**. The chartering and requisitioning process is the same as that for US flag ships. The same requisitioning authority applies to all US-owned ships registered under other flags.

d. Foreign Flag Ships

(1) As a general rule, **foreign-owned and operated shipping will be acquired through commercial charter**. However, there are some standing shipping agreements with our allies. Country-to-country shipping agreements can be arranged on short notice dependent on the crisis at hand. The US benefited from other country-provided shipping during Operation DESERT STORM.

(2) **DOD Acquisition Procedures.** After it has been determined that there is not sufficient voluntary US flag sealift capacity to meet requirements, the foreign flag ships may be chartered. **Commercial charter ships** are normally obtained through commercial charter. The procedure is the same as for US flag ships. Country relationships and politics need to be considered when chartering foreign flag ships.

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CHAPTER VI

EMPLOYMENT OF SEALIFT FORCES

“It is clear . . . that future force deployments will be extremely demanding and that there is clearly a requirement for additional sealift Our experience in the Persian Gulf has clearly validated the importance of a balanced maritime program and the contribution of our maritime industry to national defense.”

Robert Moore, Office of the Assistant Secretary of Defense (Production and Logistics) 1991

1. General

The employment of sealift begins in the execution planning phase of JOPES CAP. **Employment continues until the operation is terminated by proper authority or is completed**, including retrograde movement of forces and materiel. The employment of sealift must be undertaken with extreme care and diligence. Errors of judgment in acquiring, scheduling, and determining C2 of sealift assets may result in late delivery of units and supplies essential to the successful conduct of the operation. A complete understanding of the organizational responsibilities for sealift employment is, therefore, essential.

2. Execution

a. This phase starts with the President and SecDef decision to exercise the military option for resolution of the crisis. Acting on the authority and direction of the Secretary of Defense, the Chairman of the Joint Chiefs of Staff will issue an EXORD that directs the supported combatant commander to carry out the OPORD. The supported combatant commander then issues EXORDs to subordinate and supporting commanders directing they execute their supporting OPORDs. During this phase, changes to the OPORD may be necessary for some or all of the following reasons: strategic, operational, tactical, or intelligence considerations; force and nonunit cargo availability; availability of shipping; CONUS transportation system throughput capabilities; and port of embarkation (POE) and/or POD throughput capabilities.

b. **Execution Requirements.** Because the OPORD will probably require adjustment as it is executed, **ongoing refinement and adjustment of deployment activities are required**. At the time of execution, the OPORD TPFDD should include, at a minimum, properly identified combat, CS, and CSS units. The area of movement control in joint operations is covered in JP 4-01.3, *Joint Tactics, Techniques, and Procedures for Movement Control*.

(1) **USTRANSCOM Responsibilities.** Throughout the execution of an OPORD, **USTRANSCOM is responsible for coordinating with the supported combatant commander** for validating transportation requirements and developing, monitoring, and adjusting transportation schedules. USTRANSCOM reports the progress of the deployment to the supported combatant commander and CJCS and identifies lift shortfalls or other transportation-related problems accordingly.

(2) **Supported Combatant Commander Responsibilities.** The supported geographic combatant commander must ensure that USTRANSCOM and its transportation component commands clearly understand theater transport requirements. While developing requirements and priorities, **the supported geographic combatant commander coordinates with USTRANSCOM** to ensure that the movement control system will be ready to manage strategic movement. **The supported geographic combatant commander establishes a theater movement control organization** that has a communications link with the strategic movement system. He also establishes POD support activities. These include the arrival/departure airfield control group (A/DACG), port support activity (PSA), and movement control organization.

(3) **Supporting Combatant Commander Responsibilities.** Certain situations may require that a combatant commander support another combatant commander. This support may range from the deployment of forces to the provision of sustainment. Regardless of the mission, **the supporting commander should establish a movement control system** similar to USTRANSCOM's system. **A joint movement center**, with supporting component movement cells, manages all moves and assures compliance with the supported geographic combatant commander's priorities. **For deployments to another theater, the supporting combatant commander establishes POE activities.** These include the A/DACG, PSA, and movement control organization.

c. **Resolution of Resource Allocation Conflicts.** If several geographic combatant commander OPODs are executed simultaneously, or nearly simultaneously, resource allocation conflicts may occur. **CJCS policy is to allocate support forces such as sealift in proportion to the allocation of combat forces.** Through this mechanism, each geographic combatant commander is provided a share of the available resources consistent with national priorities. If the strategic situation requires the assignment of a greater percentage of assets to one supported combatant commander than another, **the geographic combatant commander desiring additional support may request that the Chairman of the Joint Chiefs of Staff reallocate resources from other combatant commanders.** If an agreement between the combatant commanders directly involved cannot be reached, the matter will be referred to the CJCS JTB for final resolution. The CJCS JTB's final resolution is subject to the approval of the CJCS and the SecDef.

3. Communications System Support

a. The inherent worldwide dispersal of sealift forces mandates that **sealift C2 systems be fully interoperable with GCCS.** GCCS is built such that interoperability with existing systems can be attained. GCCS will provide the information necessary in order to effectively plan, deploy, sustain, redeploy, and employ sealift forces. The sealift communications system, in its simplest form, must enable the sealift operational commander to monitor the situation, conduct assessments, develop estimates, plans, and schedules, issue orders and directives, and report status to higher authority.

b. **Concept of Command and Control.** C2 of all common-user shipping (under CDRUSTRANSCOM COCOM) is the **responsibility of MSC** as the Service component

commander assigned OPCON of those ships. Protection of shipping under MSC OPCON is the responsibility of the **Navy component commander** of geographic combatant commanders when operating in their respective areas of responsibility. This responsibility is normally executed through the exercise of TACON over merchant shipping when such authority is delegated by MSC to the respective Navy component commanders. This concept requires **close coordination between MSC and the Navy component commanders** to ensure that merchant shipping is adequately protected while transiting areas of hostile activity (refer to Chapter VII, “Naval Cooperation and Guidance for Shipping”).

c. **Control of Sealift Forces. MSC exercises C2 of merchant ships under MSC control.** When, in the opinion of the MSC area commander, the threat to shipping under MSC OPCON presents an unacceptable risk to ships and cargo, the ships will be placed under the TACON of the Navy component commander of the geographic combatant commander. Upon the departure of the ships from the danger area, control over the ships will revert to MSC.

d. **Global Command and Control System. GCCS is the primary means of C2 for SecDef** over all military forces, including sealift forces. GCCS provides air, land, and sea transportation information to DOD. GCCS is the cornerstone of communications system support. **GCCS is a deployable C2 system** that supports forces during joint and multinational operations with compatible, interoperable, and integrated communications systems. In GCCS, components update JOPES via the Secret Internet Protocol Router Network. Of the many elements of GCCS, **the JOPES is of primary interest to the sealift operator.**

(1) **Sealift Transportation Movement.** The unit move begins with an EXORD sent out by CJCS. Once notified, the installation transportation officer coordinates with SDDC to coordinate the movement requirements for deploying units. SDDC inputs or updates movement requirements in JOPES and adds the actual departure data. SDDC uses its automated database programs to configure these requirements into shiploads along with other requirements going to the same port and having the same available to load dates. This updated and coordinated requirements and shipload information is passed through JOPES to the command in need of this information. This information is exchanged in the JOPES system. MSC identifies a ship type based on the specific requirements for the unit. If MSC has insufficient chartered or government-owned sealift to satisfy the requirement, USTRANSCOM passes a request to MARAD to activate an RRF ship, activate the VISA, or requisition US flag and EUSC ships.

(2) The request is received by MARAD via secure fax or Defense Message System message (not by the JOPES system). In the event of a NATO contingency, if no acceptable US or EUSC ship is available, then MARAD as the NSA intercedes with the Civil Sealift Group for the request of a NATO flag ship. Once the ship is found, MARAD nominates the ship to MSC headquarters. When MSC accepts it and assumes OPCON, the ship information is passed to the MSC Area Command, complete with berth availability information. This happens before the unit reaches the load port, and if timed correctly, the unit moves into the seaport by rail and proceeds to the piers where the ship is prepared to receive it. As noted above, the time-phased requirements listing is updated as directed by CJCS. This enables the supported combatant commander to reprioritize the forces based on the threat, and allows USTRANSCOM to adjust

these requirements based on strategic lift available. The systems currently under development include those listed below.

e. **Global Transportation Network.** GTN is a single system that integrates information from a variety of DTS automated information systems to provide ITV and C2 data support. GTN supports the President, Secretary of Defense, the combatant commanders, the Military Services, and other DOD customers with information to better manage their warfighting and logistic capabilities. GTN integrates automated data processing and information systems, electronic commerce, and electronic data interchange to track the identity, status, and location of DOD unit and non-unit cargo, passengers, patients, forces, and military and commercial air mobility, sealift, and surface assets from origin to destination across the range of military operations. GTN feeds shipment status to Services and DLA software programs. ITV is the ability to track the identity, status, and location of DOD units, non-unit cargo (excluding bulk POL), passengers, patients, and personal property from origin to consignee or destination across the range of military operations. ITV of assets moving through the DTS or in support of DOD operations is an essential element of the DOD warfighting capability and is required by the supported combatant commanders. The transportation control number (TCN) is the alphanumeric character set assigned to a shipment (unit move and sustainment) to maintain ITV. The GTN links the TCN to the military standard requisitioning and issue procedure number, if available, and to commercial express carrier tracking numbers, if applicable. This gives the user multiple ways to track an item.

f. **Sealift Communications.** Communications systems are critical to the flow of orders and directives from the sealift commander to subordinates, and to their status reports to the commander. However, **the procedures for communicating with the sealift force are unique to military operations** because of the heavy reliance on commercial maritime systems. Hence, sealift communications are extremely vulnerable to exploitation by information operations. Communications among the military organizations involved in C2 of sealift will take place through the normal military communication channels.

(1) **Merchant Ship Communications Capabilities.** Long-range communications capabilities in strategic sealift ships range from advanced military communications and on-line cryptographic systems on some military-owned sealift ships to the satellite aided Global Maritime Distress and Safety System, and conventional high frequency (HF) and single side band voice capabilities. **The vast majority of US-owned merchant ships that would make up the sealift force are equipped with commercial satellite systems** that provide both voice and data communications capability 24 hours a day. Those ships not so equipped communicate with other ships and organizations ashore through commercial coastal radio stations, using conventional HF voice communications. Merchant ships may be provided limited capability for handling classified information through use of MSC-provided secure telephone unit systems that can be interfaced with satellite communications systems.

(2) **Interface Between Commercial and Military Communications Systems.** For naval commands to communicate rapidly and effectively with merchant ships, interfaces between commercial and military satellite communications systems have been established. However, in

most circumstances requiring direct communication between military authorities and merchant ships, unclassified messages will be transmitted via commercial channels. This requires understanding of the communications capabilities of each ship and establishes procedures for voice communications and delivery of message traffic to the ship.

For additional discussion of sealift communications see Commander, Military Sealift Command Instruction (COMSCINST) 2000.2, Communications Policy and Procedures Manual, and the National Geospatial Intelligence Agency Publication 117, Radio Navigational Aids.

g. **Operation Orders and Reports.** To ensure that assigned sealift missions are accomplished efficiently and with the desired results, **operational C2 is implemented through a system that relies on standard orders and reports.** These orders and reports are designed to provide a complete, accurate, and timely flow of essential information in both directions in the chain of command. COMSCINST 3121.9, *Standard Operating Manual*, specifies reporting requirements and procedures.

4. Intermodal Operations

a. Intermodal operations provide flexibility by incorporating various combinations of sealift, airlift, rail, and trucking operations to facilitate rapid, efficient cargo movement. In the context of commercial shipping, “intermodal” operations or systems refer primarily to the efficient interchange of standardized shipping containers between ocean and land carriers, sophisticated systems of container handling and storage in marine terminals, or container freight stations and computerized tracking of shipments. These are perhaps epitomized by the US “Land Bridge” operations in which containerized cargoes moving between Far Eastern and European seaports cross this country on dedicated “unit trains” rather than utilizing the all-water route via the Panama Canal. The advantages include savings in transit time and delivered cost, and the arrival of perishables in better condition because of reduced transit times. The existence of this commercial infrastructure has promising implications for military use, particularly in moving large numbers of containers.

b. **Container Requirements.** Current commercial sealift trends favor a **heavy emphasis on the use of containers.** The supported combatant commander’s ability to manage containerized cargo from SPODs and aerial ports of debarkation (APODs) to the troops in the field depends on the sophistication of the host country’s infrastructure and the expeditionary capability the deployed force has brought with it.

c. **Theater Support Planning.** During execution planning, it is particularly important to **consider the theater’s existing transportation infrastructure and capabilities,** so as to make maximum use of its potential for intermodal operations. Selecting SPODs and/or APODs close to major highway systems, rail networks and civilian logistic support is important even where modern, sophisticated intermodal infrastructures do not exist.

d. **Sustaining the Force.** Sustaining the force is as important as deploying it. For this reason, **intermodal operations must be planned in depth** to allow for transportation

infrastructure damage from adversary action and/or sabotage. Planning also must take into account the need for additional manpower, vehicles, and other logistic support over time, especially during redeployment. Initial HNS may eventually be withdrawn as that nation attempts to reestablish normal commercial transportation operations in support of its own economy.

For additional information on intermodal containerization refer to JP 4-01.7, Joint Tactics, Techniques, and Procedures for Use of Intermodal Containers in Joint Operations.

5. Logistic Support

In general, **merchant ships will be logistically supported by their owner and/or operators** within the terms of their charters or other agreements when the ships are using commercial seaports for loading and discharge of military cargo. Merchant ships are normally provisioned at the beginning of every voyage with 60 to 90 days of consumable items. This will usually be sufficient for a ship to make the round-trip between POE and POD, including the required cargo discharge time at the POD. The exception to this is that **merchant ships under MSC OPCON are generally supplied with fuel from military sources**. This may take the form of direct payment for fuel from commercial sources or actual transfer of military fuels to merchant ships. The latter is most likely to occur in the supported combatant commander's area of responsibility as the ships deliver their cargoes after a long voyage. On shorter voyages the ships may be able to return without refueling. Other in-theater logistic support to merchant shipping will usually be limited to assistance in treatment and repatriation of sick or injured crew members, expediting the arrival of crew replacements and high priority spare parts, mail delivery, and arranging or providing tugs, pilots, and nautical charts and publications when required. **Should vessel repairs be required in-theater, commercial facilities, when available, should be used** due to their familiarity with merchant ships' requirements and to keep naval repair facilities available to naval combatants.

6. Amphibious/Expeditionary Operations

a. An amphibious force is defined as an amphibious task force (ATF) and landing force (LF), together with other forces that are trained, organized, and equipped for amphibious operations. An ATF is defined as a Navy task organization formed to conduct amphibious operations. An LF is defined as a Marine Corps or Army task organization formed to conduct amphibious operations. Navy elements in an ATF include various types and classes of ships to include combatant and strategic sealift and support units from various warfare specialties. The LF is comprised of a C2 HQ, aviation and/or ground combat units, and CS/CSS units and is assigned to conduct the amphibious assault. **The LF is divided into two echelons, assault echelons (AEs) and the AFOE**. The AE is the element of the LF that is scheduled for initial assault on the objective area. The AE is those troops, vehicles, aircraft, equipment, and supplies required to initiate the assault. The AE is normally embarked on amphibious shipping. The AFOE is that echelon of assault troops, vehicles, aircraft, equipment, and supplies which, though not needed to initiate the assault, are required to support and sustain the assault. In order to accomplish its purpose, it is normally required in the objective area no later than 5 days after commencement of the assault landing. Portions of the AFOE may be required ashore sooner

because of the tactical situation. As part of the LF, the AFOE also should be embarked on amphibious assault shipping. Given the number of Navy and amphibious ships available today, only the AE is expected to be embarked on amphibious assault shipping. The AFOE is normally embarked on strategic sealift shipping. **An integral part of the ATF is the NSE.** The NSE consists of cargo handling, beach, and lighterage groups, equipped and trained to discharge ships in stream and at pierside. Doctrine regarding the employment of sealift in amphibious operations is contained in JP 3-02, *Joint Doctrine for Amphibious Operations*, and Naval Warfare Publication (NWP) 3-02.21, *MSC Support of Amphibious Operations*.

b. Employment of Assault Follow-On Echelon Shipping. The AFOE consists of additional combat troops, vehicles, non-self-deployable aircraft, equipment and supplies that, though not essential to initiate the assault, are required to support and sustain the assault. This organization is not to be confused with Marine Corps units deployed by MPS, which will be addressed below. When an ATF is being formed by the supported combatant commander, USTRANSCOM allocates shipping for the AFOE mission to the supported combatant commander. These ships are then integrated into the Navy component commander's operations and incorporated with the forces of the commander, amphibious task force (CATF). AFOE sealift assets will be positioned and loaded at port facilities, generally where ATF support cargo and personnel can be most expeditiously and efficiently loaded to meet AFOE mission requirements. Loadout of AFOE shipping will be nearly simultaneous with the loadout of AE shipping. The AFOE will deploy in accordance with the CATF's amphibious OPLAN. The AFOE must be discharged swiftly and safely in sufficient time to support the landing force. When a ship of the AFOE has completed discharging its cargo, it may be returned by the supported combatant commander to the USTRANSCOM common-user shipping pool. Operational Handbook 7-8, *Deployment of the Assault Follow on Echelon (AFOE)*, discusses AFOE concepts and procedures in detail.

c. Transfer of Afloat Pre-Positioning Force to Common-User Status. Strategic sealift in the APF will be transferred to common-user status when released by the supported combatant commander. However, it may be necessary for the supported combatant commander to retain afloat PREPO or, more probably, MPS ships as theater support assets to meet specific operational requirements. This is called withhold shipping. A prime example arose during Operations DESERT SHIELD and DESERT STORM when suitable AFOE ships could not be acquired for a Marine expeditionary brigade. Upon arrival in-theater, MPS ships were retained by the geographic combatant commander for use as AFOE shipping. When the APF ships are transferred to the common-user pool, their support is coordinated through USTRANSCOM and MSC in the same manner as for all other common-user ships.

d. Logistics Over-The-Shore

(1) This section provides only general, nontechnical descriptions of various LOTS systems. For more detailed discussion of system description, capabilities, limitations, and requirements, JP 4-01.6, *Joint Tactics, Techniques, and Procedures for Joint Logistics Over-the-Shore (JLOTS)*, should be consulted.

(2) The major naval systems for in-stream cargo offload and discharge is the **cargo offload and discharge system (COLDS)**. COLDS has two major subsystems; for dry cargo, the **cargo offloading and transfer system**, and for liquid cargo the **off-shore bulks fuel system**. Navy COLDS equipment and facilities include lighterage causeway ferries, floating piers, the RO/RO discharge facilities, and elevated causeway expeditionary pier. Liquid cargo offload is supported by the amphibious assault bulk fuel/water system and OPDS. Army LOTS equipment includes terminal service unit handling equipment, shore-based water storage systems, and the tactical petroleum terminal. LOTS operations can be conducted over unimproved shorelines, through fixed ports not accessible to deep draft vessels, and through fixed ports that are inadequate without the use of LOTS capabilities.

CHAPTER VII

NAVAL COOPERATION AND GUIDANCE FOR SHIPPING

“Our ships are our natural bulwarks.”

Woodrow Wilson

1. General

a. Naval cooperation and guidance for shipping (NCAGS) has emerged from its predecessors known as naval coordination and protection of shipping (NCAPS), and naval control of shipping (NCOS). Both NCAPS and NCOS were established to meet a Cold War–era national need to protect merchant shipping against a global open ocean threat through the means of military escorts, large convoys, and administrative procedures. Given the advancements in both the information technology, and maritime transportation and industries, it was necessary to adapt the concepts of “protection of merchant shipping” and “deconfliction of merchant and military vessels” to meet current day requirements and leveraging technology.

b. In periods of crisis, conflict, national emergency or war, naval authorities may direct the movement of merchant ships (including routing and diversion) so that they may be better protected from hostilities and not interfere with possible active naval, joint, or combined military operations. The NCAGS organization is the principal US resource to carry out this function. The purpose of NCAGS is to ensure the efficient management and safe passage of merchant ships that are not performing strategic sealift functions.

c. The mission and command structure of the NCAGS organization are described below, as well as the procedures to implement NCAGS for commercial shipping. Additional guidance may be found in Naval Tactics, Techniques, and Procedures (NTTP) 3-07.12, *Naval Cooperation and Guidance for Shipping*, and Allied Tactical Publication (ATP)- 2 (B) Volume 1, *Naval Cooperation and Guidance for Shipping Manual*.

2. Organization

a. The NCAGS organization is comprised of approximately 200 personnel. US Fleet Forces Command is responsible for overall program management and control of assets.

b. There are currently four units assigned to the NCAGS organization. Each unit is composed of 48 personnel possessing a variety of operational warfare skills as well as specialized skills relating to the civil maritime industry. Each unit provides the capabilities to: liaise with the civil maritime industry and the operational commander; deploy shipping coordination teams ashore or afloat; and establish or augment shipping coordination centers (SCCs) with skilled personnel. When assigned, NCAGS components are operationally controlled through either the surface warfare commander or the joint force maritime component commander (JFMCC).

c. NCAGS facilitates cooperation between the military and civil maritime industry: to minimize the economic impact as a result of commercial shipping operating in the vicinity of

naval vessels engaged in military operations; and to ensure the safe passage of commercial shipping, safety of naval vessels, and limit. This is accomplished through communication, development of the common operating picture, and deconflicting, and protective guidance for merchant shipping. NCAGS policy approval and coordination with other government agencies concerned with merchant shipping functions requires consideration of political and legal consequences. These functions are the responsibility of the geographic combatant/operational commander. When utilized, the NCAGS functional element should be an integral part of the operational commander's organization. Responsibility for managing merchant shipping in accordance with approved NCAGS policy is incumbent upon the geographic combatant/operational commander and may be delegated.

3. Mission and Capabilities

a. The NCAGS mission is to assist the geographic combatant/operational commander in managing risk by providing situational awareness and near real-time clarity of the merchant shipping picture to help ensure the safe passage of merchant shipping and the safety of naval vessels or the nation in a crisis contingency. This mission primarily involves the employing a framework and capabilities for communicating directions, advisories, concerns, and/or information among NCAGS organizational elements (e.g., SCCs, operational forces, merchant shipping, and maritime organizations) the deconfliction of merchant vessel sailings/operations, for safety or operational reasons, to preclude interference with naval or merchant ship activities; and making recommendations to the geographic combatant/operational commander on the extent and type of protection that may be provided to merchant shipping.

b. The NCAGS organization provides the operational commander with the following capabilities: liaison officers, shipping coordination teams (SCTs), and SCCs.

c. Liaison officers are the senior military subject matter experts responsible for advising the military commander on all matters relating to the civil maritime industry. They are responsible for evaluating how NCAGS should be employed and recommending courses of action to operational commander, and interacting with business leaders in the civil maritime industry (for the purpose of cooperation).

d. The SCT provides an expeditionary capability to the operational commander. SCTs can both be located ashore or afloat, and provide the manpower to support a 24 hr watch section. SCTs provide the capability to manage regional commercial shipping information and disseminate that through the common operating environment. Depending on commercial traffic density and or complexity of operations, additional SCTs can be added to meet requirements.

e. The SCCs is the foundation of the NCAGS organization. Ideally a SCC is located at the operational level (normally within an command center or a USCG Maritime Intelligence Fusion Center). SCCs are comprised of watch officers, maritime analysts, plotters, as well as their supporting command infrastructure. SCCs are regionally focused to support the combatant commander through its JFMCC in improving maritime domain awareness as it relates to merchant

shipping (other than strategic sealift). SCCs are responsible for maintaining and refining commercial shipping information within the common operating picture.

4. Implementing Naval Cooperation and Guidance for Shipping Measures for Commercial Shipping

While many NCAGS techniques and procedures are currently being employed to support the military commander, the decision to implement NCAGS measures having a direct impact on commercial shipping requires the approval of the Secretary of Defense. Because of the potential economic impact (delivery times, insurance rates, etc.), the NSA should be consulted when considering to implement NCAGS measures outlined in NTTP 3-07.12 and ATP-2 (B) Volume 1. Foreign flag commercial shipping may participate in protocols and measures set forth by the NCAGS organization on a voluntary basis, under the request of the vessel's owner or the flag state. The Chief of Naval Operations, as the NCAGS organization program sponsor, with the support of US Fleet Forces Command will maintain liaison with the NSA and other civilian authorities to coordinate the exchange of information concerning implementation of NCAGS measures.

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APPENDIX A

MERCHANT SHIP NAVAL AUGMENTATION PROGRAM

1. General

Merchant Ship Naval Augmentation Program (MSNAP) features and equipment are designed to enable merchant ships of the Department of Transportation MARAD RRF and ships assigned to or contracted to the MSC to augment and, when needed, to act as combat logistics force (CLF) ships during a contingency or war. These ships are combatant commander-allocated assets in service with MSC or sustained in the RRF to support the Navy CLF mission. Ships modified with MSNAP systems will be deployed to US or overseas ports for loadout. They will resupply US Fleet ships with ordnance, other dry stores, or fuel. The major MSNAP systems are: MCDS, vertical replenishment (VERTREP) decks and Modular Fuel Delivery System (MFDS).

2. Modular Cargo Delivery System

MCDS installed on three RRF breakbulk ships enable the ships to perform standard tensioned replenishment alongside method (STREAM) UNREP operations with US and Allied ships equipped with a dry cargo UNREP receiving station. The MCDS is a self-contained STREAM station installed on the port side forward and aft of the breakbulk ships. Throughput rates are similar to those of naval and MSC UNREP rigs.

3. Vertical Replenishment

VERTREP decks are installed on the three MCDS equipped ships to provide daylight, hover only UNREP service to the Fleet. The helicopters utilized are assigned to the CLF or Navy ship with an assigned flight crew. MCDS ships are not equipped to maintain helicopters. MCDS equipped ships may receive helicopters of sizes normally used for VERTREP operations in the Fleet.

4. Modular Fuel Delivery System

MFDS installed on two MSC T-5 tankers chartered to MSC enable the ships to perform refueling at sea (RAS) using the STREAM rigs to USN and Allied ships equipped with standard receiving stations. Each ship includes two RAS stations on the port side forward and aft and is capable of providing fuel at rates comparable to that of Navy and MSC CLF ships.

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APPENDIX B

REFERENCES

The development of JP 4-01.2 is based upon the following primary references:

1. Title 10, United States Code.
2. Title 50, United States Code.
3. DOD 4500.9-R, *Defense Transportation Regulation, Part II, Cargo Movement*.
4. DOD 4500.9-R, *Defense Transportation Regulation, Part III, Mobility*.
5. DOD Directive 5158.4, *United States Transportation Command*.
6. CJCSI 3110.01, *Joint Strategic Capabilities Plan (JSCP) for FY 2002*.
7. CJCSI 3110.11E, *Mobility Supplement to the Joint Strategic Capabilities Plan*.
8. CJCSM 3122.01, *Joint Operation Planning and Execution System (JOPES) Vol I: (Planning Policies and Procedures)*.
9. CJCSM 3122.02B, *Joint Operation Planning and Execution System (JOPES) Vol III: (Crisis Action Time-Phased Force and Deployment Data Development and Deployment Execution)*.
10. CJCSM 3122.03A, *Joint Operation Planning and Execution System (JOPES) Vol II: (Planning Formats and Guidance)*.
11. JP 0-2, *Unified Action Armed Forces (UNAAF)*.
12. JP 1-02, *Department of Defense Dictionary of Military and Associated Terms*.
13. JP 3-02, *Joint Doctrine for Amphibious Operations*.
14. JP 3-02.1, *Joint Doctrine for Landing Force Operations*.
15. JP 3-02.2, *Joint Doctrine for Amphibious Embarkation and Debarkation*.
16. JP 3-35, *Joint Deployment and Redeployment Operations*.
17. JP 4-0, *Doctrine for Logistic Support of Joint Operations*.
18. JP 4-01, *Joint Doctrine for the Defense Transportation System*.
19. JP 4-01.3, *Joint Tactics, Techniques, and Procedures for Movement Control*.

20. JP 4-01.5, *Joint Tactics, Techniques, and Procedures for Transportation Terminal Operations*.
21. JP 4-01.6, *Joint Tactics, Techniques, and Procedures for Joint Logistics Over-the-Shore (JLOTS)*.
22. JP 4-01.7, *Joint Tactics, Techniques, and Procedures for Use of Intermodal Containers in Joint Operations*.
23. JP 4-01.8, *Joint Tactics, Techniques, and Procedures for Joint Reception, Staging, Onward Movement, and Integration*.
24. National Disclosure Policy 4, *Naval Logistics*.
25. NTTP 3-07.12, *Naval Cooperation and Guidance for Shipping*.
26. NWP 3-02.3, *Maritime Prepositioning Force Operations*.
27. NWP 3-02.21, *MSC Support of Amphibious Operations*.
28. Marine Corps Warfare Publication 3-32, *Maritime Prepositioning Force Operations*.
29. FM 55-50, *Army Water Transport Operations*.
30. FM 55-65, *Strategic Deployment*.
31. COMSCINST 2000.2, *Communications Policy and Procedures Manual*.
32. COMSCINST 3121.9A CH-2, *Standard Operating Manual*.
33. Operational Handbook 7-8, *Deployment of the Assault Follow on Echelon (AFOE)*.

APPENDIX C

ADMINISTRATIVE INSTRUCTIONS

1. User Comments

Users in the field are highly encouraged to submit comments on this publication to: Commander, United States Joint Forces Command, Joint Warfighting Center, ATTN: Doctrine and Education Group, 116 Lake View Parkway, Suffolk, VA 23435-2697. These comments should address content (accuracy, usefulness, consistency, and organization), writing, and appearance.

2. Authorship

The lead agent for this publication is the United States Transportation Command. The Joint Staff doctrine sponsor for this publication is the Director for Logistics (J-4).

3. Supersession

This publication supersedes JP 4-01.2, 9 October 1996, *Joint Tactics, Techniques, and Procedures for Sealift Support to Joint Operations*.

4. Change Recommendations

- a. Recommendations for urgent changes to this publication should be submitted:

TO: CDRUSTRANSCOM SCOTT AFB IL//TCJ5-S//
INFO: JOINT STAFF WASHINGTON DC//J4/J7-JEDD//
CDRUSJFCOM SUFFOLK VA//DOC GP//

Routine changes should be submitted electronically to Commander, Joint Warfighting Center, Doctrine and Education Group and info the Lead Agent and the Director for Operational Plans and Joint Force Development J-7/JEDD via the CJCS JEL at <http://www.dtic.mil/doctrine>.

- b. When a Joint Staff directorate submits a proposal to the Chairman of the Joint Chiefs of Staff that would change source document information reflected in this publication, that directorate will include a proposed change to this publication as an enclosure to its proposal. The Military Services and other organizations are requested to notify the Joint Staff/J-7 when changes to source documents reflected in this publication are initiated.

c. Record of Changes:

CHANGE NUMBER	COPY NUMBER	DATE OF CHANGE	DATE ENTERED	POSTED BY	REMARKS

5. Distribution of Printed Publications

a. Additional copies of this publication can be obtained through the Service publication centers listed below (initial contact) or USJFCOM in the event that the joint publication is not available from the Service.

b. Individuals and agencies outside the combatant commands, Services, Joint Staff, and combat support agencies are authorized to receive only approved joint publications and joint test publications. Release of any classified joint publication to foreign governments or foreign nationals must be requested through the local embassy (Defense Attaché Office) to DIA Foreign Liaison Office, PO-FL, Room 1E811, 7400 Defense Pentagon, Washington, DC 20301-7400.

c. Additional copies should be obtained from the Military Service assigned administrative support responsibility by DOD Directive 5100.3, 15 November 1999, *Support of the Headquarters of Unified, Specified, and Subordinate Joint Commands*.

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Navy:	CO, Naval Inventory Control Point 700 Robbins Avenue Bldg 1, Customer Service Philadelphia, PA 19111-5099
Marine Corps:	Commander (Attn: Publications) 814 Radford Blvd, Suite 20321 Albany, GA 31704-0321

Coast Guard: Commandant (G-OPD)
 US Coast Guard
 2100 2nd Street, SW
 Washington, DC 20593-0001

 Commander
 USJFCOM JWFC Code JW2102
 Doctrine and Education Group (Publication Distribution)
 116 Lake View Parkway
 Suffolk, VA 23435-2697

d. Local reproduction is authorized and access to unclassified publications is unrestricted. However, access to and reproduction authorization for classified joint publications must be in accordance with DOD Regulation 5200.1-R, *Information Security Program*.

6. Distribution of Electronic Publications

a. The Joint Staff will not print copies of electronic joint publications for distribution. Electronic versions are available at www.dtic.mil/doctrine (NIPRNET), or <http://nmcc20a.nmcc.smil.mil/dj9j7ead/doctrine/> (SIPRNET).

b. Only approved joint publications and joint test publications are releasable outside the combatant commands, Services, and Joint Staff. Release of any classified joint publication to foreign governments or foreign nationals must be requested through the local embassy (Defense Attaché Office) to DIA Foreign Liaison Office, PO-FL, Room 1E811, 7400 Defense Pentagon, Washington, DC 20301-7400.

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GLOSSARY

PART I — ABBREVIATIONS AND ACRONYMS

ACE	aviation combat element
A/DACG	arrival/departure airfield control group
AE	assault echelon
AFOE	assault follow-on echelon
APF	afloat pre-positioning force
APOD	aerial port of debarkation
APS-3	afloat pre-positioning stocks
ATF	amphibious task force
ATP	allied tactical publication
BBL	barrel (42 US gallons)
BTU	beach termination unit
C2	command and control
CAP	crisis action planning
CATF	commander, amphibious task force
CDRUSTRANSCOM	Commander, United States Transportation Command
CJCS	Chairman of the Joint Chiefs of Staff
CJCSI	Chairman of the Joint Chiefs of Staff instruction
CJCSM	Chairman of the Joint Chiefs of Staff manual
CLF	combat logistics force
COA	course of action
COCOM	combatant command (command authority)
COLDS	cargo offload and discharge system
COMSC	Commander, Military Sealift Command
COMSCINST	Commander, Military Sealift Command instruction
CONOPS	concept of operations
CONUS	continental United States
CS	combat support
CSS	combat service support
DLA	Defense Logistics Agency
DOD	Department of Defense
DODD	Department of Defense directive
DOT	Department of Transportation
DTS	Defense Transportation System
DWT	deadweight tonnage
EUSC	effective United States control/controlled
EXORD	execute order

FM	field manual
FSS	fast sealift ships
ft ³	cubic feet
FY	fiscal year
GCCS	Global Command and Control System
GTN	Global Transportation Network
HF	high frequency
HN	host nation
HNS	host-nation support
HQ	headquarters
ICODES	integrated computerized deployment system
ISO	International Organization for Standardization
ITV	in-transit visibility
JFAST	joint flow and analysis system for transportation
JFC	joint force commander
JFMCC	joint force maritime component commander
JMC	joint movement center
JOPES	Joint Operation Planning and Execution System
JP	joint publication
JPAG	Joint Planning Advisory Group
JSCP	Joint Strategic Capabilities Plan
JTB	Joint Transportation Board
LASH	lighter aboard ship
lb	pound
LF	landing force
LMSR	large, medium speed roll-on/roll-off
LO/LO	lift-on/lift-off
LOTS	logistics over-the-shore
LT	long ton
MAGTF	Marine air-ground task force
MARAD	Maritime Administration
MCDS	modular cargo delivery system
MF	mobile facility
MFDS	Modular Fuel Delivery System
MPS	maritime pre-positioning ship
MSC	Military Sealift Command
MSNAP	merchant ship naval augmentation program
MT	measurement ton

NATO	North Atlantic Treaty Organization
NCAGS	naval cooperation and guidance for shipping
NCAPS	naval coordination and protection of shipping
NCOS	naval control of shipping
NDAF	Navy, Defense Logistics Agency, Air Force
NDRF	National Defense Reserve Fleet
NSA	national shipping authority
NSE	Navy support element
NTTP	naval tactics, techniques, and procedures
NWP	naval warfare publication
OPCON	operational control
OPDS	offshore petroleum discharge system (Navy)
OPLAN	operation plan
OPORD	operation order
OPSEC	operations security
OVM	Operation Vigilant Mariner
PCTC	pure car and truck carrier
POD	port of debarkation
POE	port of embarkation
POL	petroleum, oils, and lubricants
PREPO	pre-positioning
PSA	port support activity
RAS	refueling at sea
RO/RO	roll-on/roll-off
ROS	reduced operating status
RRF	Ready Reserve Force
SALM	single-anchor leg mooring
SCC	shipping coordination center
SCT	shipping coordination team
SDDC	Surface Deployment and Distribution Command
SDDCTEA	Surface Deployment and Distribution Command Transportation Engineering Agency
SEABEE	sea barge
SecDef	Secretary of Defense
SECNAV	Secretary of the Navy
SECTRANS	Secretary of Transportation
SEF	sealift enhancement feature
SPOD	seaport of debarkation
SPOE	seaport of embarkation
ST	short ton
STREAM	standard tensioned replenishment alongside method

TACON	tactical control
T-ACS	tactical auxiliary crane ship
T-AH	hospital ship
T-AVB	aviation logistics support ship
TC-AIMS II	Transportation Coordinator's Automated Information for Movement System II
TCN	transportation control number
TEU	twenty-foot equivalent unit
T-JTB	Theater-Joint Transportation Board
TPFDD	time-phased force and deployment data
TWCF	Transportation Working Capital Fund
UNREP	underway replenishment
USAF	United States Air Force
USCG	United States Coast Guard
USG	United States Government
USMC	United States Marine Corps
USN	United States Navy
USNORTHCOM	United States Northern Command
USTRANSCOM	United States Transportation Command
VERTREP	vertical replenishment
VISA	Voluntary Intermodal Sealift Agreement
VTA	voluntary tanker agreement

PART II — TERMS AND DEFINITIONS

active sealift forces. Military Sealift Command active, common-user sealift and the afloat pre-positioning force, including the required cargo handling and delivery systems as well as necessary operating personnel. (JP 1-02)

afloat pre-positioning force. Shipping maintained in full operational status to afloat pre-position military equipment and supplies in support of combatant commanders' operation plans. The afloat pre-positioning force consists of the three maritime pre-positioning ships squadrons, the Army's afloat pre-positioning stocks-3 ships, and the Navy, Defense Logistics Agency, and Air Force ships. Also called APF. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

afloat pre-positioning operations. Pre-positioning of ships, preloaded with equipment and supplies (including ammunition and petroleum) that provides for an alternative to land-based programs. This concept provides for ships and onboard force support equipment and supplies positioned near potential crisis areas that can be delivered rapidly to joint airlifted forces in the operational area. Afloat pre-positioning in forward areas enhances a force's capability to respond to a crisis, resulting in faster reaction time. (JP 1-02)

afloat pre-positioning ships. Forward deployed merchant ships loaded with tactical equipment and supplies to support the initial deployment of military forces. Also called APS. (JP 1-02)

amphibious force. An amphibious task force and a landing force together with other forces that are trained, organized, and equipped for amphibious operations. Also called AF. (JP 1-02)

amphibious task force. A Navy task organization formed to conduct amphibious operations. The amphibious task force, together with the landing force and other forces, constitutes the amphibious force. Also called ATF. (JP 1-02)

assault echelon. In amphibious operations, the element of a force comprised of tailored units and aircraft assigned to conduct the initial assault on the operational area. Also called AE. (JP 1-02)

assault follow-on echelon. In amphibious operations, that echelon of the assault troops, vehicles, aircraft, equipment, and supplies that, though not needed to initiate the assault, is required to support and sustain the assault. In order to accomplish its purpose, it is normally required in the objective area no later than five days after commencement of the assault landing. Also called AFOE. (JP 1-02)

combatant command (command authority). Nontransferable command authority established by title 10 ("Armed Forces"), United States Code, section 164, exercised only by commanders of unified or specified combatant commands unless otherwise directed by the President or

the Secretary of Defense. Combatant command (command authority) cannot be delegated and is the authority of a combatant commander to perform those functions of command over assigned forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction over all aspects of military operations, joint training, and logistics necessary to accomplish the missions assigned to the command. Combatant command (command authority) should be exercised through the commanders of subordinate organizations. Normally this authority is exercised through subordinate joint force commanders and Service and/or functional component commanders. Combatant command (command authority) provides full authority to organize and employ commands and forces as the combatant commander considers necessary to accomplish assigned missions. Operational control is inherent in combatant command (command authority). Also called COCOM. (JP 1-02)

command and control. The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission. Also called C2. (JP 1-02)

common-user ocean terminals. A military installation, part of a military installation, or a commercial facility operated under contract or arrangement by the Surface Deployment and Distribution Command which regularly provides for two or more Services terminal functions of receipt, transit storage or staging, processing, and loading and unloading of passengers or cargo aboard ships. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

common-user sealift. The sealift services provided on a common basis for all Department of Defense agencies and, as authorized, for other agencies of the US Government. The Military Sealift Command, a transportation component command of the US Transportation Command, provides common-user sealift for which users reimburse the transportation accounts of the Transportation Working Capital Fund. (JP 1-02)

common-user transportation. Transportation and transportation services provided on a common basis for two or more Department of Defense agencies and, as authorized, non-Department of Defense agencies. Common-user assets are under the combatant command (command authority) of Commander, United States Transportation Command, excluding Service-organic or theater-assigned transportation assets. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

container. An article of transport equipment that meets American National Standards Institute/International Organization for Standardization standards that is designed to be transported by various modes of transportation. These containers are also designed to facilitate and optimize the carriage of goods by one or more modes of transportation without intermediate

handling of the contents and equipped with features permitting ready handling and transfer from one mode to another. Containers may be fully enclosed with one or more doors, open top, refrigerated, tank, open rack, gondola, flatrack, and other designs. See also containerization. (JP 1-02)

container-handling equipment. Items of materials-handling equipment required to specifically receive, maneuver, and dispatch International Organization for Standardization containers. Also called CHE. (JP 1-02)

containerization. The use of containers to unitize cargo for transportation, supply, and storage. Containerization incorporates supply, transportation, packaging, storage, and security together with visibility of container and its contents into a distribution system from source to user. See also container. (JP 1-02)

controlled shipping. Shipping that is controlled by the Military Sealift Command. Included in this category are Military Sealift Command ships (United States Naval Ships), government-owned ships operated under a general agency agreement, and commercial ships under charter to the Military Sealift Command. (JP 1-02)

effective US controlled ships. US-owned foreign flagships that can be tasked by the Maritime Administration to support Department of Defense requirements when necessary. Also called EUSCS. (JP 1-02)

fly-in echelon. Includes the balance of the initial assault force, not included in the assault echelon, and some aviation support equipment. Also called FIE. (JP 1-02)

general agency agreement. A contract between Maritime Administration and a steamship company which, as general agent, exercises administrative control over a government-owned ship for employment by the Military Sealift Command. Also called GAA. (JP 1-02)

Global Transportation Network. The automated support necessary to enable US Transportation Command and its components to provide global transportation management. The Global Transportation Network provides the integrated transportation data and systems necessary to accomplish global transportation planning, command and control, and in-transit visibility across the range of military operations. The designated Department of Defense in-transit visibility system provides customers with the ability to track the identity, status, and location of Department of Defense units and non-unit cargo, passengers, patients, forces, and military and commercial airlift, sealift, and surface assets from origin to destination across the range of military operations. The Global Transportation Network collects, integrates, and distributes transportation information to combatant commanders, Services, and other Department of Defense customers. Global Transportation Network provides US Transportation Command with the ability to perform command and control operations, planning and analysis, and business operations in tailoring customer requirements throughout the requirements process. Also called GTN. (JP 1-02)

government-owned, contract-operated ships. Those ships to which the US Government holds title and which the Military Sealift Command operates under a contract (i.e., nongovernment-manned). These ships are designated United States Naval Ships and use the prefix “USNS” with the ship name and the letter “T” as a prefix to the ship classification (e.g., T-AKR). See also Military Sealift Command; United States Naval Ship. (JP 1-02)

government-owned, Military Sealift Command-operated ships. Those ships to which the US Government holds title and which the Military Sealift Command operates with US Government (civil service) employees. These ships are designated United States Naval Ships and use the prefix “USNS” with the ship name and the letter “T” as a prefix to the ship classification (e.g., T-AKR). See also Military Sealift Command; United States Naval Ship. (JP 1-02)

intracoastal sealift. Shipping used primarily for the carriage of personnel and/or cargo along a coast or into river ports to support operations within a given area. (JP 1-02)

intermodal systems. Specialized transportation facilities, assets, and handling procedures designed to create a seamless transportation system by combining multimodal operations and facilities during the shipment of cargo. (JP 1-02)

in-transit visibility. The ability to track the identity, status, and location of Department of Defense units, and non-unit cargo (excluding bulk petroleum, oils, and lubricants) and passengers; patients; and personal property from origin to consignee or destination across the range of military operations. Also called ITV. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

joint logistics over-the-shore operations. Operations in which Navy and Army logistics over-the-shore forces conduct logistics over-the-shore operations together under a joint force commander. Also called JLOTS operations. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

Joint Operation Planning and Execution System. A system that provides the foundation for conventional command and control by national- and combatant command-level commanders and their staffs. It is designed to satisfy their information needs in the conduct of joint planning and operations. Joint Operation Planning and Execution System includes joint operation planning policies, procedures, and reporting structures supported by communications and automated data processing systems. The system is used to monitor, plan, and execute mobilization, deployment, employment, sustainment, and redeployment activities associated with joint operations. Also called JOPES. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

joint operation planning process. A coordinated Joint Staff procedure used by a commander to determine the best method of accomplishing assigned tasks and to direct the action necessary to accomplish the mission. (JP 1-02)

Joint Transportation Board. Responsible to the Chairman of the Joint Chiefs of Staff, the Joint Transportation Board assures that common-user transportation resources assigned or available to the Department of Defense are allocated as to achieve maximum benefit in meeting Department of Defense objectives. Also called JTB. See also common-user transportation. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

line of communications. A route, either land, water, and/or air, which connects an operating military force with a base of operations and along which supplies and military forces move. Also called LOC. (JP 1-02)

logistics over-the-shore operations. The loading and unloading of ships without the benefit of deep draft-capable, fixed port facilities; or as a means of moving forces closer to tactical assembly areas dependent on threat force capabilities. Also called LOTS operations. (JP 1-02)

long ton. 2,240 pounds. Also called LT; L/T; or LTON. (JP 1-02)

Maritime Administration Ready Reserve Force. The Maritime Administration (MARAD) Ready Reserve Force is composed of 68 surge sealift assets owned and operated by the US Department of Transportation/MARAD and crewed by civilian mariners. In time of contingency or exercises, the ships are placed under the operational command of the Military Sealift Command. (JP 1-02)

maritime pre-positioning ships. Civilian-crewed, Military Sealift Command-chartered ships that are organized into three squadrons and are usually forward-deployed. These ships are loaded with pre-positioned equipment and 30 days of supplies to support three Marine expeditionary brigades. Also called MPS. (JP 1-02)

measurement ton. The unit of volumetric measurement of equipment associated with surface-delivered cargo. Measurement tons equal total cubic feet divided by 40 (1MTON = 40 cubic feet). Also called M/T, MT, MTON. (JP 1-02)

Military Sealift Command. A major command of the US Navy reporting to Commander Fleet Forces Command, and the US Transportation Command's component command responsible for designated common-user sealift transportation services to deploy, employ, sustain, and redeploy US forces on a global basis. Also called MSC. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

Military Sealift Command-controlled ships. Those ships assigned by the Military Sealift Command (MSC) for a specific operation. They may be MSC nucleus fleet ships, contract-operated MSC ships, MSC-controlled time or voyage-chartered commercial ships, or MSC-controlled ships allocated by the Maritime Administration to MSC to carry out Department of Defense objectives. (JP 1-02)

Military Sealift Command force. The Military Sealift Command force common-user sealift consists of three subsets: the Naval Fleet Auxiliary Force, common-user ocean transportation, and the special mission support force. These ship classes include governmentowned ships (normally civilian-manned) and ships acquired by Military Sealift Command charter or allocated from other government agencies. See also common-user sealift; Military Sealift Command. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

national shipping authority. The organization within each Allied government responsible in time of war for the direction of its own merchant shipping. Also called NSA. (JP 1-02)

naval coordination and protection of shipping. Control exercised by naval authorities of movement, routing, reporting, convoy organization, and tactical diversion of allied merchant shipping. It does not include the employment or active protection of such shipping. (This term and its definition modify the existing term “naval control of shipping” and its definition and are approved for inclusion in the next edition of JP 1-02.)

naval coordination and protection of shipping officer. A naval officer appointed to form merchant convoys and control and coordinate the routing and movements of such convoys, independently sailed merchant ships, and hospital ships in and out of a port or base. (This term and its definition modify the existing term “naval control of shipping officer” and its definition and are approved for inclusion in the next edition of JP 1-02.)

naval coordination and protection of shipping organization. The organization within the Navy which carries out the specific responsibilities of the Chief of Naval Operations to provide for the control and protection of movements of merchant ships in time of war. Also called NCAPS organization. (This term and its definition modify the existing term “naval control of shipping organization” and its definition and are approved for inclusion in the next edition of JP 1-02.)

Ocean Cargo Clearance Authority. The Surface Deployment and Distribution Command activity that books Department of Defense sponsored cargo and passengers for surface movement, performs related contract administration, and accomplishes export and import surface traffic management functions for Department of Defense cargo moving within the Defense Transportation System. Also called OCCA. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

operational control. Command authority that may be exercised by commanders at any echelon at or below the level of combatant command. Operational control is inherent in combatant command (command authority) and may be delegated within the command. When forces are transferred between combatant commands, the command relationship the gaining commander will exercise (and the losing commander will relinquish) over these forces must be specified by the Secretary of Defense. Operational control is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. Operational control includes authoritative direction over all aspects of military operations and joint training necessary to accomplish missions assigned to the command. Operational control should be exercised through the commanders of subordinate organizations. Normally this authority is exercised through subordinate joint force commanders and Service and/or functional component commanders. Operational control normally provides full authority to organize commands and forces and to employ those forces as the commander in operational control considers necessary to accomplish assigned missions; it does not, in and of itself, include authoritative direction for logistics or matters of administration, discipline, internal organization, or unit training. Also called OPCON. (JP 1-02)

point-to-point sealift. The movement of troops and/or cargo in Military Sealift Command nucleus or commercial shipping between established ports, in administrative landings, or during logistics over-the-shore operations. (JP 1-02)

port of debarkation. The geographic point at which cargo or personnel are discharged. This may be a seaport or aerial port of debarkation; for unit requirements; it may or may not coincide with the destination. Also called POD. (JP 1-02)

port of embarkation. The geographic point in a routing scheme from which cargo or personnel depart. This may be a seaport or aerial port from which personnel and equipment flow to a port of debarkation; for unit and non-unit requirements, it may or may not coincide with the origin. Also called POE. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

reduced operating status. Applies to the Military Sealift Command ships withdrawn from full operating status because of decreased operational requirements. A ship in reduced operating status is crewed in accordance with shipboard maintenance and possible future operational requirements with crew size predetermined contractually. The condition of readiness in terms of calendar days required to attain full operating status is designated by the numeral following the acronym ROS (i.e., ROS-5). Also called ROS. (This term and its definition modify the existing term “reduced operational status” and its definition and are approved for inclusion in the next edition of JP 1-02.)

sealift enhancement features. Special equipment and modifications that adapt merchant-type dry cargo ships and tankers to specific military missions. They are typically installed on Ready Reserve Force ships or ships under Military Sealift Command control. Sealift

enhancements fall into three categories: productivity, survivability, and operational enhancements. Also called SEF. (This term and its definition modify the existing term “sealift enhancement program” and its definition and are approved for inclusion in the next edition of JP 1-02.)

Sealift Readiness Program. A standby contractual agreement between Military Sealift Command and US ship operators for voluntary provision of private ships for defense use. Call-up of ships may be authorized by joint approval of the Secretary of Defense and the Secretary of Transportation. Also called SRP. (JP 1-02)

seaport. A land facility designated for reception of personnel or materiel moved by sea, and that serves as an authorized port of entrance into or departure from the country in which located. (This term and its definition modify the existing term “sea port” and its definition and are approved for inclusion in the next edition of JP 1-02.)

Service-organic transportation assets. Transportation assets that are: a. Assigned to a Military Department for functions of the Secretaries of the Military Departments set forth in Sections 3013(b), 5013(b), and 8013(b) of Title 10 of the United States Code, including administrative functions (such as motor pools), intelligence functions, training functions, and maintenance functions; b. Assigned to the Department of the Army for the execution of the missions of the Army Corps of Engineers; c. Assigned to the Department of the Navy as the special mission support force of missile range instrumentation ships, ocean survey ships, cable ships, oceanographic research ships, acoustic research ships, and naval test support ships; the naval fleet auxiliary force of fleet ammunition ships, fleet stores ships, fleet ocean tugs, and fleet oilers; hospital ships; and Navy Unique Fleet Essential Airlift Aircraft to provide delivery of passengers and/or cargo from forward Air Mobility Command channel hubs to mobile fleet units; Marine Corps intermediate maintenance activity ships, Marine Corps helicopter support to senior Federal officials; and, prior to the complete discharge of cargo, maritime pre-positioning ships; d. Assigned to the Department of the Air Force for search and rescue, weather reconnaissance, audiovisual services, and aeromedical evacuation functions, and transportation of senior Federal officials. (JP 1-02)

single manager for transportation. The United States Transportation Command is the Department of Defense single manager for transportation, other than Service-organic or theater-assigned transportation assets. See also Service-organic transportation assets; theater-assigned transportation assets; United States Transportation Command. (JP 1-02)

single port manager. Through its transportation component commands, the US Transportation Command is the Department of Defense-designated single port manager for all common-user aerial and seaports worldwide. The single port manager performs those functions necessary to support the strategic flow of the deploying forces’ equipment and sustainment from the aerial and seaport of embarkation and hand-off to the combatant commander in the aerial and seaport of debarkation. The single port manager is responsible for providing strategic deployment status information to the combatant commander and to manage workload of the aerial port of debarkation and seaport of debarkation operator based on the

commander's priorities and guidance. The single port manager is responsible through all phases of the theater aerial and seaport operations continuum, from a unimproved airfield and bare beach deployment to a commercial contract supported deployment. Also called SPM. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

strategic mobility. The capability to deploy and sustain military forces worldwide in support of national strategy. (JP 1-02)

strategic sealift. The afloat pre-positioning and ocean movement of military materiel in support of US and multinational forces. Sealift forces include organic and commercially acquired shipping and shipping services, including chartered foreign-flag vessels and associated shipping services. (JP 1-02)

strategic sealift forces. Sealift forces composed of ships, cargo handling and delivery systems, and the necessary operating personnel. They include US Navy, US Marine Corps, and US Army elements with Active and Reserve components. Merchant marine vessels manned by civilian mariners may constitute part of this force. (JP 1-02)

strategic sealift shipping. Common-user ships of the Military Sealift Command force, including pre-positioned ships after their pre-positioning mission has been completed and they have been returned to the operational control of the Military Sealift Command. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

Surface Deployment and Distribution Command. A major command of the US Army, and the US Transportation Command's component command responsible for designated continental United States land transportation as well as common-user water terminal and traffic management service to deploy, employ, sustain, and redeploy US forces on a global basis. Also called SDDC. (JP 1-02)

tactical control. Command authority over assigned or attached forces or commands, or military capability or forces made available for tasking, that is limited to the detailed direction and control of movements or maneuvers within the operational area necessary to accomplish missions or tasks assigned. Tactical control is inherent in operational control. Tactical control may be delegated to, and exercised at any level at or below the level of combatant command. When forces are transferred between combatant commands, the command relationship the gaining commander will exercise (and the losing commander will relinquish) over these forces must be specified by the Secretary of Defense. Tactical control provides sufficient authority for controlling and directing the application of force or tactical use of combat support assets within the assigned mission or task. Also called TACON. (JP 1-02)

theater. The geographical area for which a commander of a combatant command has been assigned responsibility. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

theater-assigned transportation assets. Transportation assets that are assigned under the combatant command (command authority) of a geographic combatant commander. See also combatant command (command authority); single manager for transportation. (JP 1-02)

time-phased force and deployment data. The Joint Operation Planning and Execution System database portion of an operation plan; it contains time-phased force data, non-unit-related cargo and personnel data, and movement data for the operation plan, including the following: a. In-place units; b. Units to be deployed to support the operation plan with a priority indicating the desired sequence for their arrival at the port of debarkation; c. Routing of forces to be deployed; d. Movement data associated with deploying forces; e. Estimates of non-unit-related cargo and personnel movements to be conducted concurrently with the deployment of forces; and f. Estimate of transportation requirements that must be fulfilled by common-user lift resources as well as those requirements that can be fulfilled by assigned or attached transportation resources. Also called TPFDD. (JP 1-02)

traffic management. The direction, control, and supervision of all functions incident to the procurement and use of freight and passenger transportation services. (JP 1-02)

transportation component command. The three component commands of United States Transportation Command: Air Force Air Mobility Command; Navy Military Sealift Command; and Army Military Surface Deployment and Distribution Command. Each transportation component command remains a major command of its parent Service and continues to organize, train, and equip its forces as specified by law. Each transportation component command also continues to perform Service-unique missions. Also called TCC. See also United States Transportation Command. (JP 1-02)

unified command. unified command. A command with a broad continuing mission under a single commander and composed of significant assigned components of two or more Military Departments that is established and so designated by the President through the Secretary of Defense with the advice and assistance of the Chairman of the Joint Chiefs of Staff. Also called unified combatant command. (JP 1-02)

United States Naval Ship. A public vessel of the United States that is in the custody of the Navy and is: a. Operated by the Military Sealift Command and manned by a civil service crew; or b. Operated by a commercial company under contract to the Military Sealift Command and manned by a merchant marine crew. Also called USNS. (JP 1-02)

United States Transportation Command. The unified command with the mission to provide strategic air, land, and sea transportation and common-user port management for the Department of Defense across the range of military operations. Also called USTRANSCOM. See also global transportation network; single port manager; transportation component command; unified command. (JP 1-02)

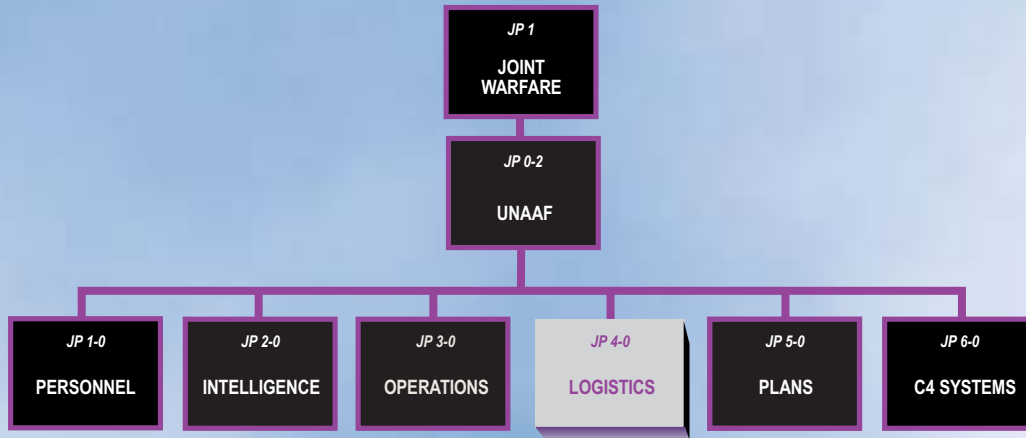
Voluntary Intermodal Sealift Agreement. An agreement that provides the Department of Defense with assured access to US flag assets, both vessel capacity and intermodal systems, to meet Department of Defense contingency requirements. Carriers contractually commit specified portions of their fleet to meet time-phased Department of Defense contingency requirements. Also called VISA. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

voluntary tanker agreement. An agreement established by the Maritime Administration to provide for US commercial tanker owners and operators to voluntarily make their vessels available to satisfy the Department of Defense needs. It is designed to meet contingency or war requirements for point-to-point petroleum, oils, and lubricants movements, and not to deal with capacity shortages in resupply operations. Also called VTA. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

Worldwide Port System. Automated information system to provide cargo management and accountability to water port and regional commanders while providing in-transit visibility to the Global Transportation Network. Also called WPS. (JP 1-02)

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JOINT DOCTRINE PUBLICATIONS HIERARCHY



All joint doctrine and tactics, techniques, and procedures are organized into a comprehensive hierarchy as shown in the chart above. **Joint Publication (JP) 4-01.2** is in the **Logistics** series of joint doctrine publications. The diagram below illustrates an overview of the development process:

